

The Virginia Tech–USDA Forest Service Housing Commentary: Section I December 2022



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Virginia Polytechnic Institute and State University

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[http://woodproducts.sbio.vt.edu/housing-report.](http://woodproducts.sbio.vt.edu/housing-report)

To request the commentary, please email: buehlmann@gmail.com or delton.r.alderman@usda.gov

Opening Remarks

Year-over-year and month-over-month data were mostly negative. Housing under construction and completions (year-over-year), in December, were the “bright” spots for new housing construction. Increasing borrowing costs and consumer sentiment, combined with elevated house prices have resulted in a major obstacle for new and existing house sales.

The February 8th Atlanta Fed GDPNow™ total residential investment spending forecast is a negative 11.7% (quarterly log change). New private permanent site expenditures were projected at -6.3%; the improvement spending forecast was 1.1%; and the manufactured/mobile home expenditures projection was -1.5% (all: quarterly log change and at a seasonally adjusted annual rate).¹

“... Deloitte expects construction to fall for the remainder of this year and in 2023. Housing may bounce back for a year or two after the current downturn runs its course. Demographics, meanwhile, suggest that housing is not likely to become a key driver of economic growth in the foreseeable future. Population growth has slowed to about 0.5% per year (compared to over 1% during the 2000s housing boom). The baseline forecast assumes that, after the recovery from the current housing downturn, housing starts will eventually begin to slowly fall. Faster medium-term growth in housing would require faster population growth, most likely from immigration. Otherwise, the heightened demand for housing during the pandemic is likely to be a short-term phenomenon. ... ”² – Daniel Bachman, Senior Manager, Deloitte Services LP

This month’s commentary contains applicable housing data, remodeling commentary, and United States housing market observations. Section I contains relevant data, remodeling, and housing finance commentary. Section II includes regional Federal Reserve analysis, private firm indicators, and demographic/economic information.

Sources: ¹ www.frbatlanta.org/cqer/research/gdpnow.aspx; 2/8/23;

² <https://www2.deloitte.com/us/en/insights/economy/us-economic-forecast/united-states-outlook-analysis.html?id=us:2em:3pa:economic-outlook:eng:di:010323; 1/19/23>

December 2022

Housing Scorecard

	M/M	Y/Y
Housing Starts	▼ -1.4%	▼ -21.8%
Single-Family (SF) Starts	▲ 11.3%	▼ -25.0%
Multi-Family (MF) Starts*	▼ -19.0%	▼ -14.9%
Housing Permits	▼ -1.0%	▼ -29.5%
SF Permits	▼ -6.4%	▼ -34.6%
MF Permits*	▲ 6.3%	▼ -22.1%
Housing Under Construction	▲ 0.6%	▲ 12.3%
SF Under Construction	▲ 0.3%	▼ -0.1%
Housing Completions	▼ -8.4%	▲ 6.4%
SF Completions	▼ -8.0%	▼ -0.9%
New SF House Sales	▲ 2.3%	▼ 26.6%
Private Residential Construction Spending	▼ 0.3%	▲ 1.7%
SF Construction Spending	▼ 2.3%	▼ 14.7%
Existing House Sales ¹	▼ 1.5%	▼ 34.0%

* All multi-family (2 to 4 + ≥ 5-units)

M/M = month-over-month; Y/Y = year-over-year;
NC = No change

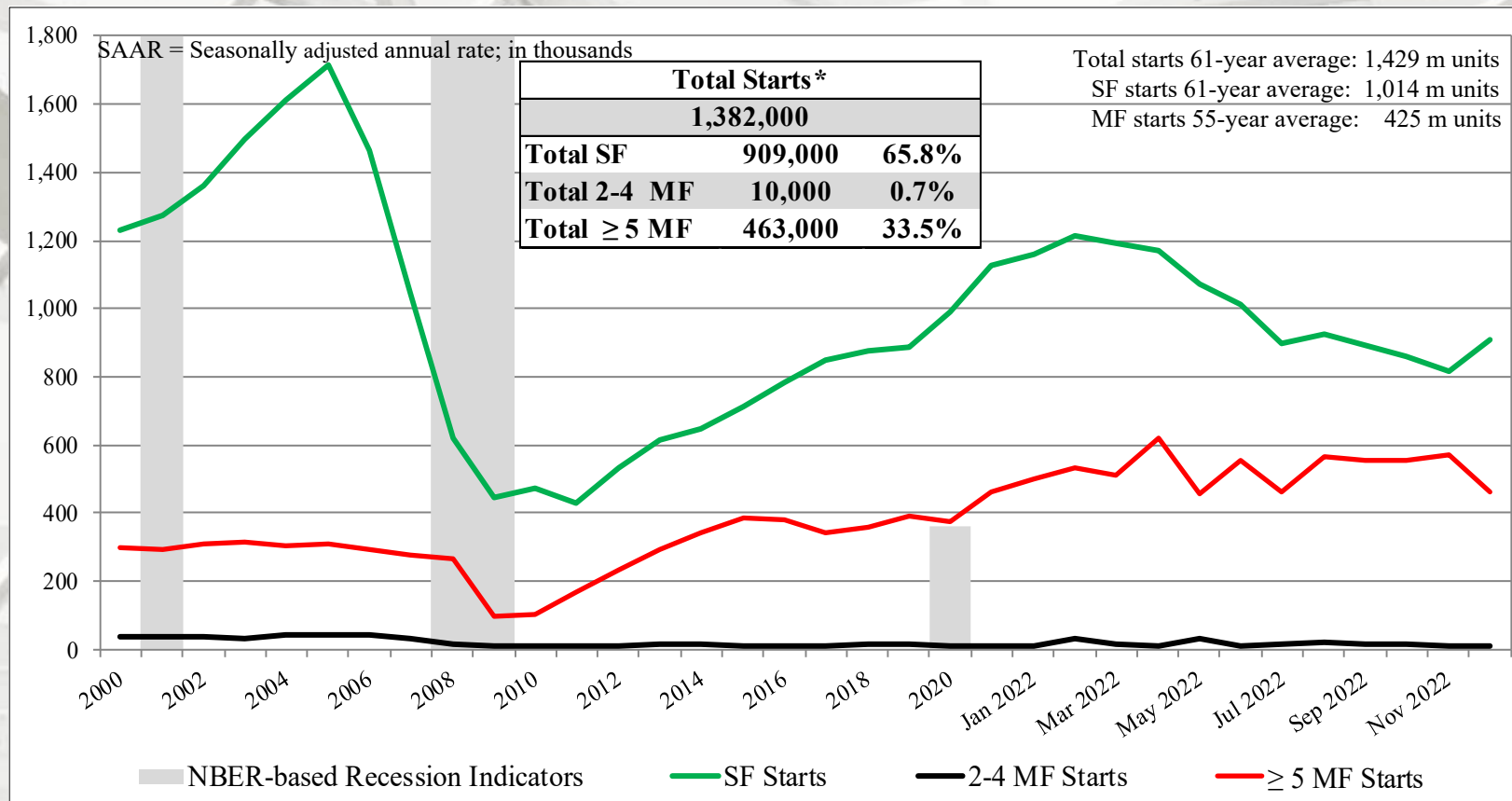
New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
December	1,382,000	909,000	10,000	463,000
November	1,401,000	817,000	13,000	571,000
2021	1,768,000	1,212,000	3,000	553,000
M/M change	-1.4%	11.3%	-23.1%	-18.9%
Y/Y change	-21.8%	-25.0%	233.3%	-16.3%

* All start data are presented at a seasonally adjusted annual rate (SAAR).

** US DOC does not report 2 to 4 multi-family starts directly; this is an estimation ((Total starts – (SF + 5-unit MF)).

Total Housing Starts

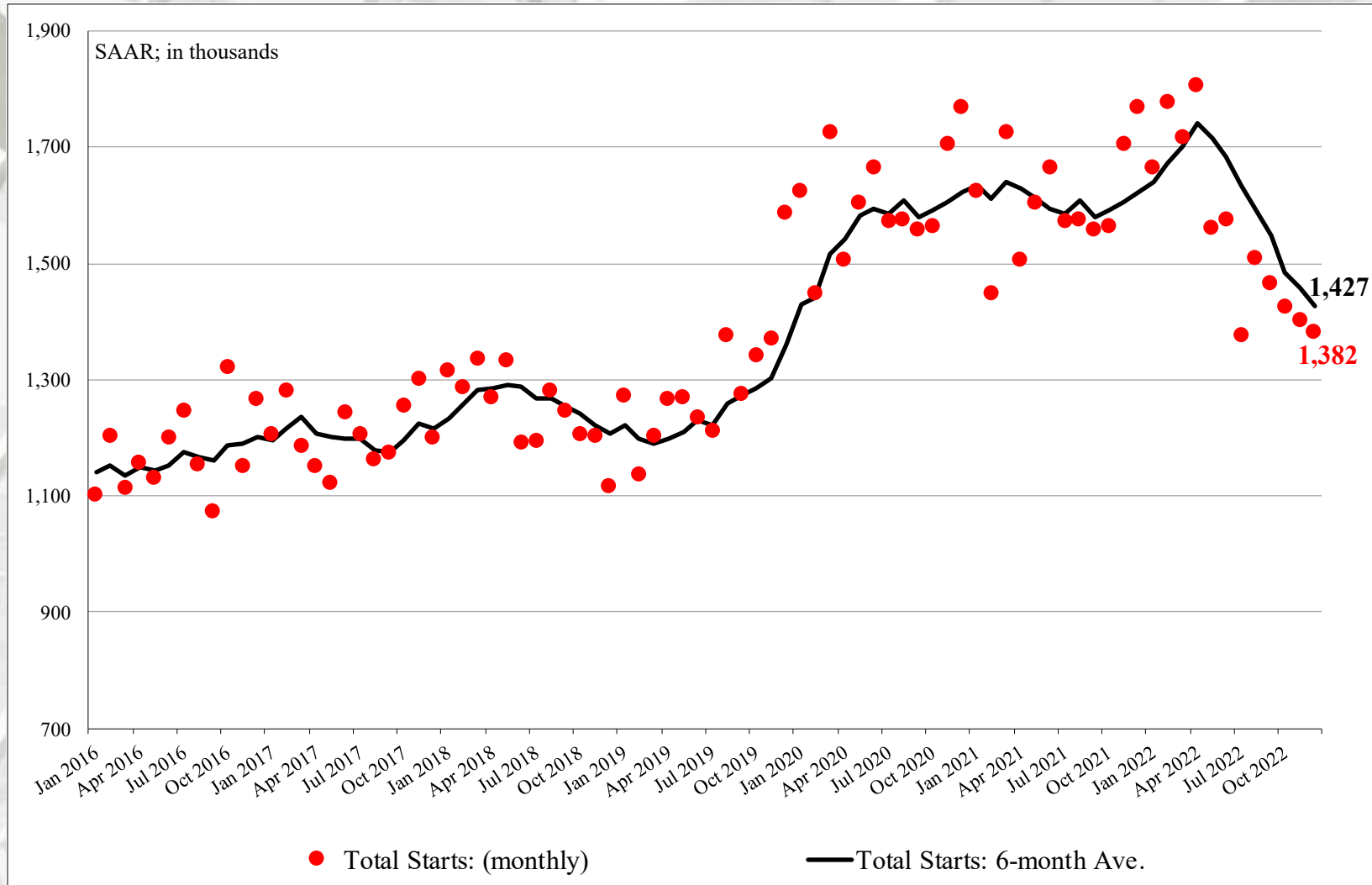


US DOC does not report 2 to 4 multi-family starts directly; this is an estimation: (Total starts – (SF + 5-unit MF)).

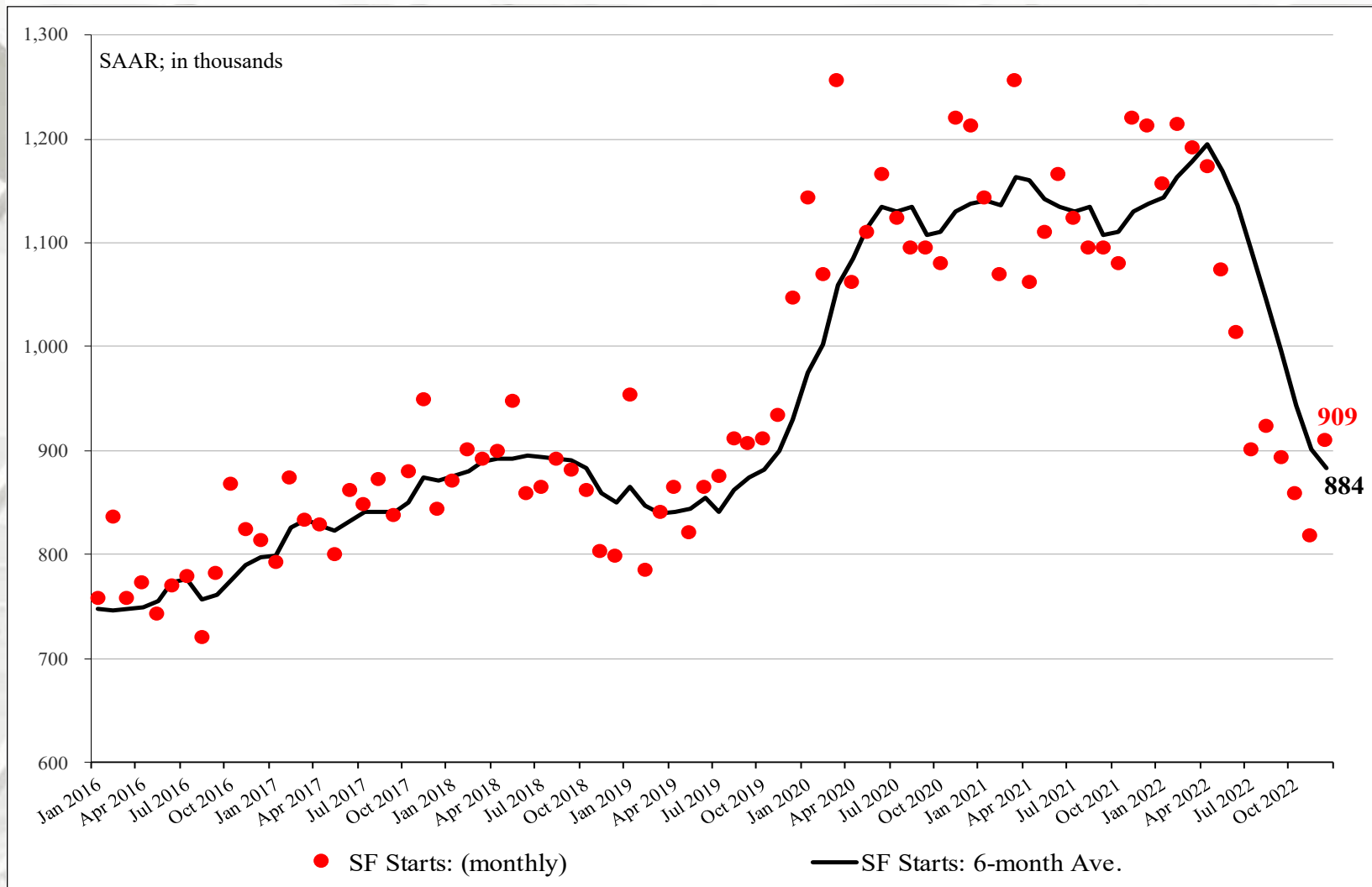
* Percentage of total starts.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

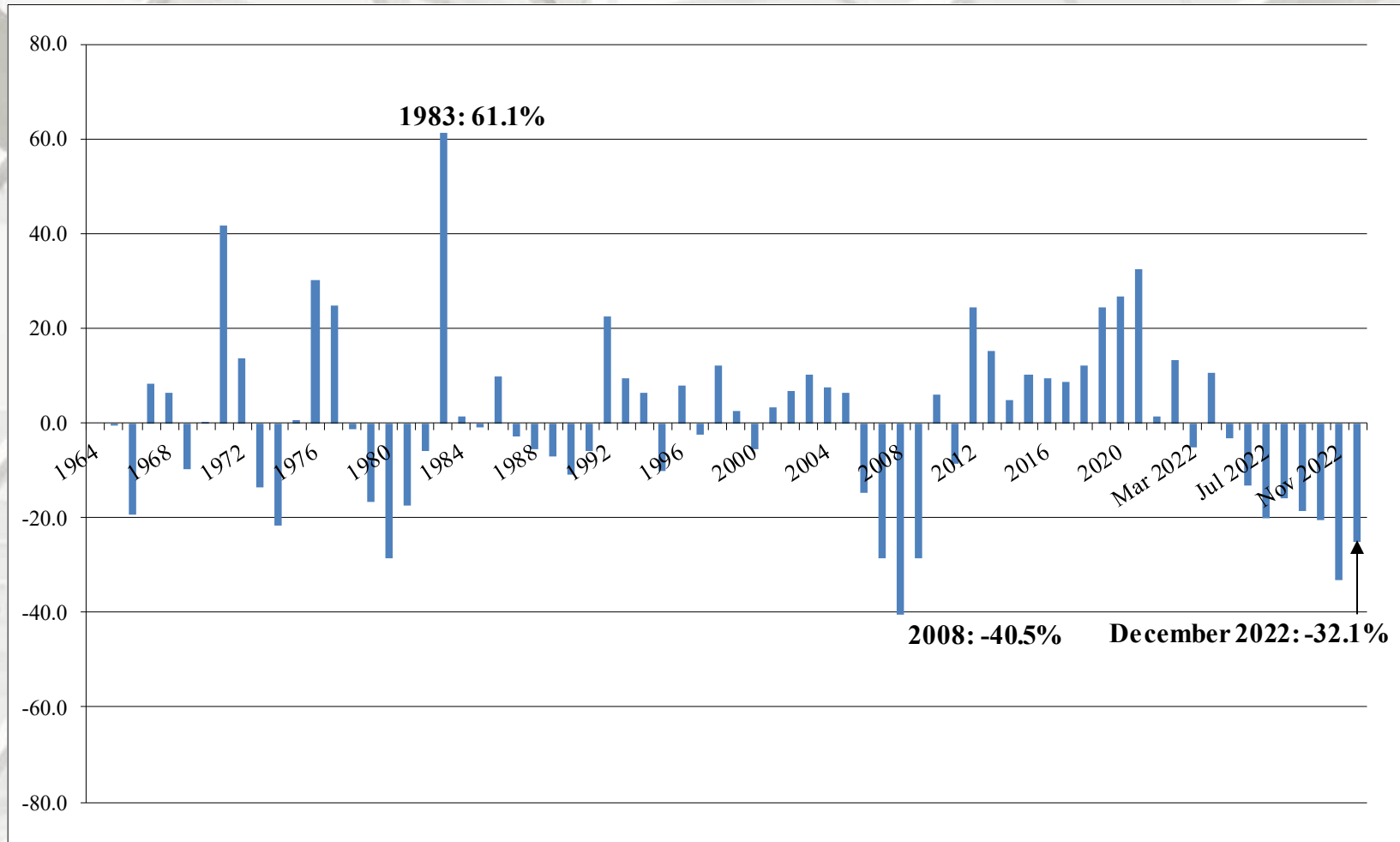
Total Housing Starts: Six-Month Average



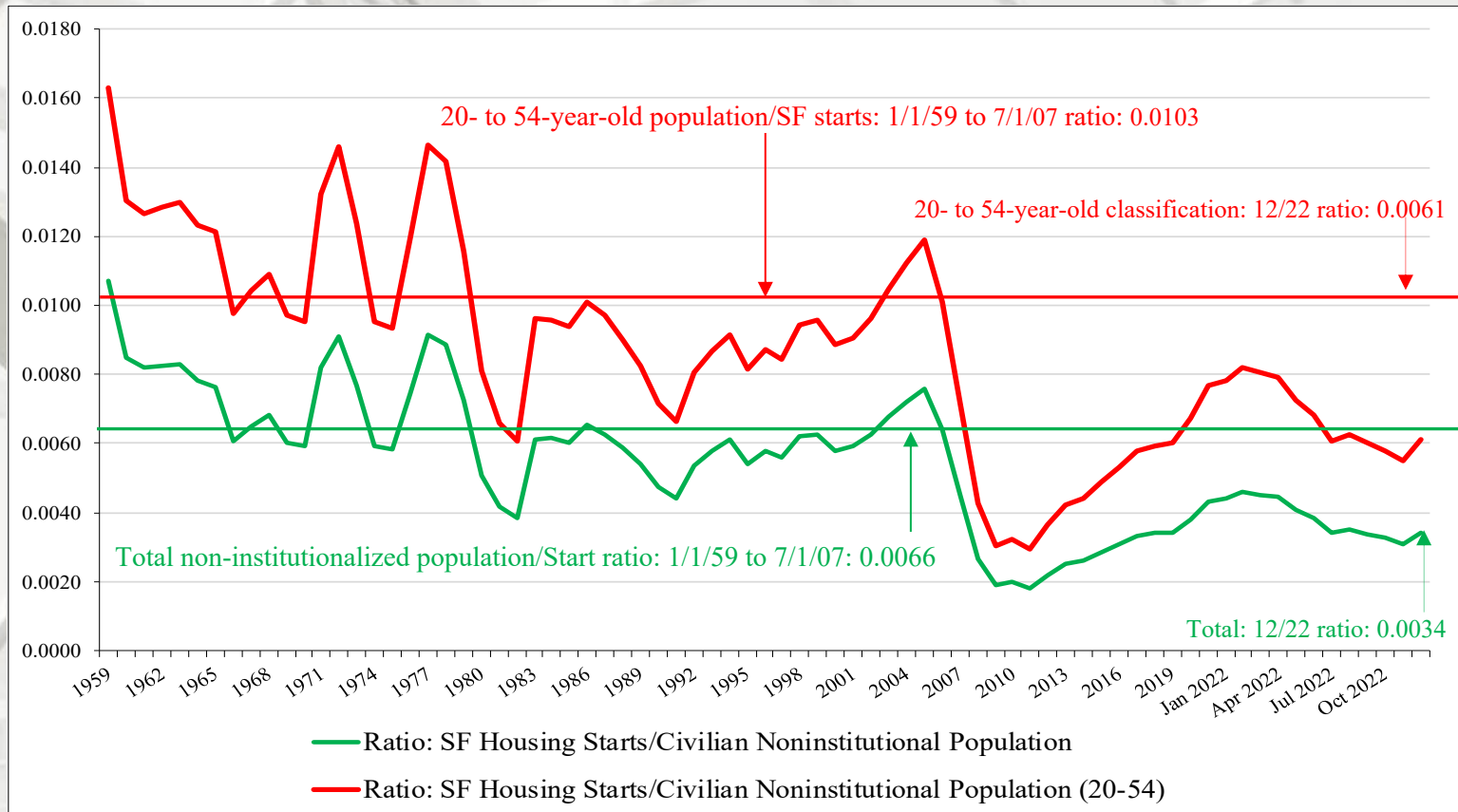
SF Housing Starts: Six-Month Moving Average



SF Housing Starts: Year-over-Year Change (%)



New SF Starts

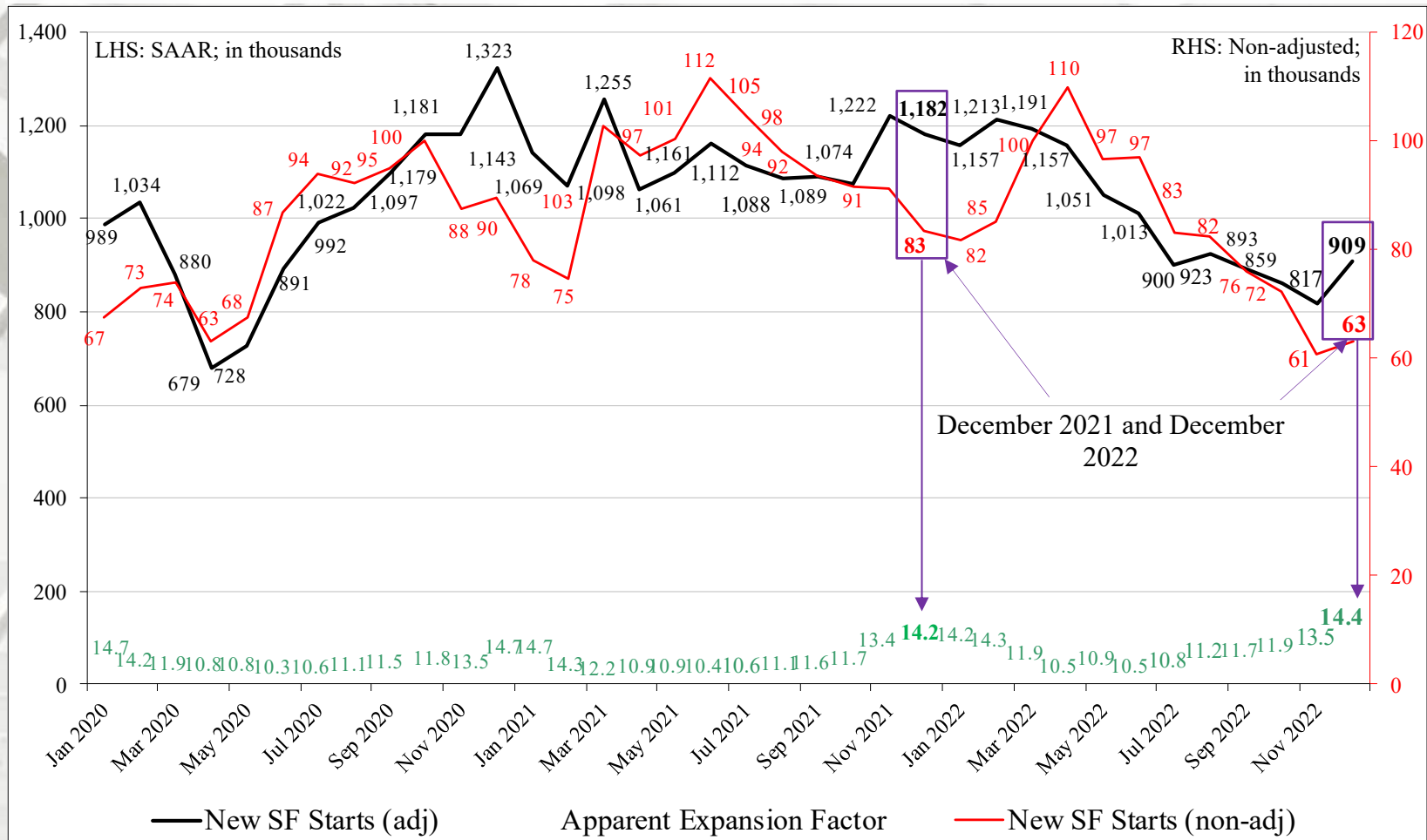


New SF starts adjusted for the US population

From December 1959 to December 2007, the long-term ratio of new SF starts to the total US non-institutionalized population to is 0.0066. In December 2022 it was 0.0034 – an increase from November. The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in December 2022 it was 0.0061 – also an improvement from November (0.0055). New SF construction in both age categories is less than what is necessary for changes in the population (i.e., under-building).

Note some studies report normalized long-term demand at 900,000 to 1,000,000 new SF house starts per year – beginning in 2025 through 2050.

Nominal & SAAR SF Starts



Nominal and Adjusted New SF Monthly Starts

Presented above is nominal (non-adjusted) new SF start data contrasted against SAAR data.

The apparent expansion factor "... is the ratio of the unadjusted number of houses started in the US to the seasonally adjusted number of houses started in the US (i.e., to the sum of the seasonally adjusted values for the four regions)." – U.S. DOC-Construction

New Housing Starts by Region

	NE Total	NE SF	NE MF**
December	212,000	128,000	84,000
November	90,000	65,000	25,000
2021	141,000	69,000	72,000
M/M change	135.6%	96.9%	236.0%
Y/Y change	50.4%	85.5%	16.7%
	MW Total	MW SF	MW MF
December	129,000	92,000	37,000
November	206,000	96,000	110,000
2021	335,000	212,000	123,000
M/M change	-37.4%	-4.2%	-66.4%
Y/Y change	-61.5%	-56.6%	-69.9%

All data are SAAR; NE = Northeast and MW = Midwest.

** US DOC does not report multi-family starts directly; this is an estimation (Total starts – SF starts).

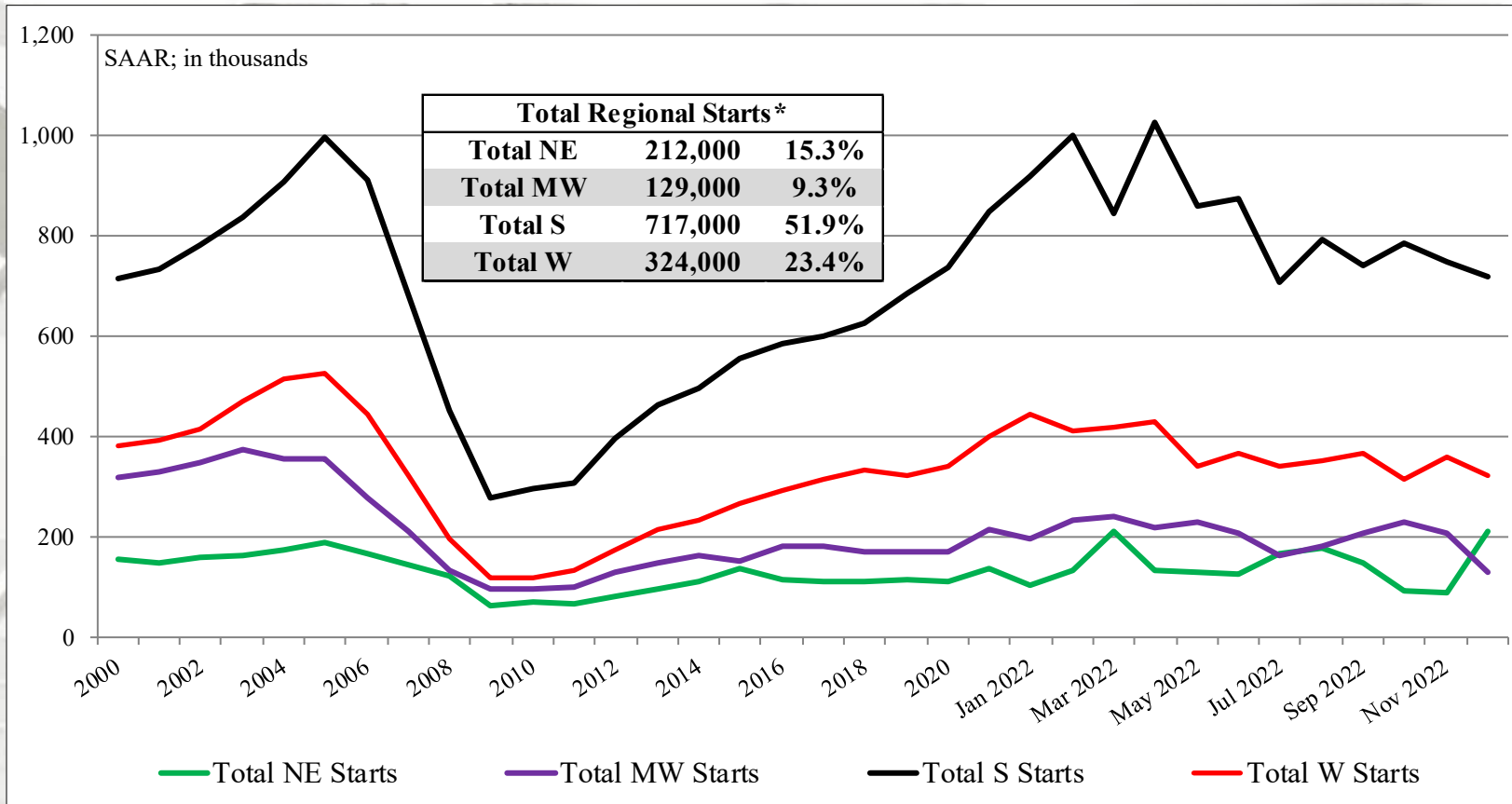
New Housing Starts by Region

	S Total	S SF	S MF**
December	717,000	497,000	220,000
November	747,000	476,000	271,000
2021	901,000	670,000	231,000
M/M change	-4.0%	4.4%	-18.8%
Y/Y change	-20.4%	-25.8%	-4.8%
	W Total	W SF	W MF
December	324,000	192,000	132,000
November	358,000	180,000	178,000
2021	391,000	261,000	130,000
M/M change	-9.5%	6.7%	-25.8%
Y/Y change	-17.1%	-26.4%	1.5%

All data are SAAR; S = South and W = West.

** US DOC does not report multi-family starts directly; this is an estimation (Total starts – SF starts).

New Housing Starts by Region

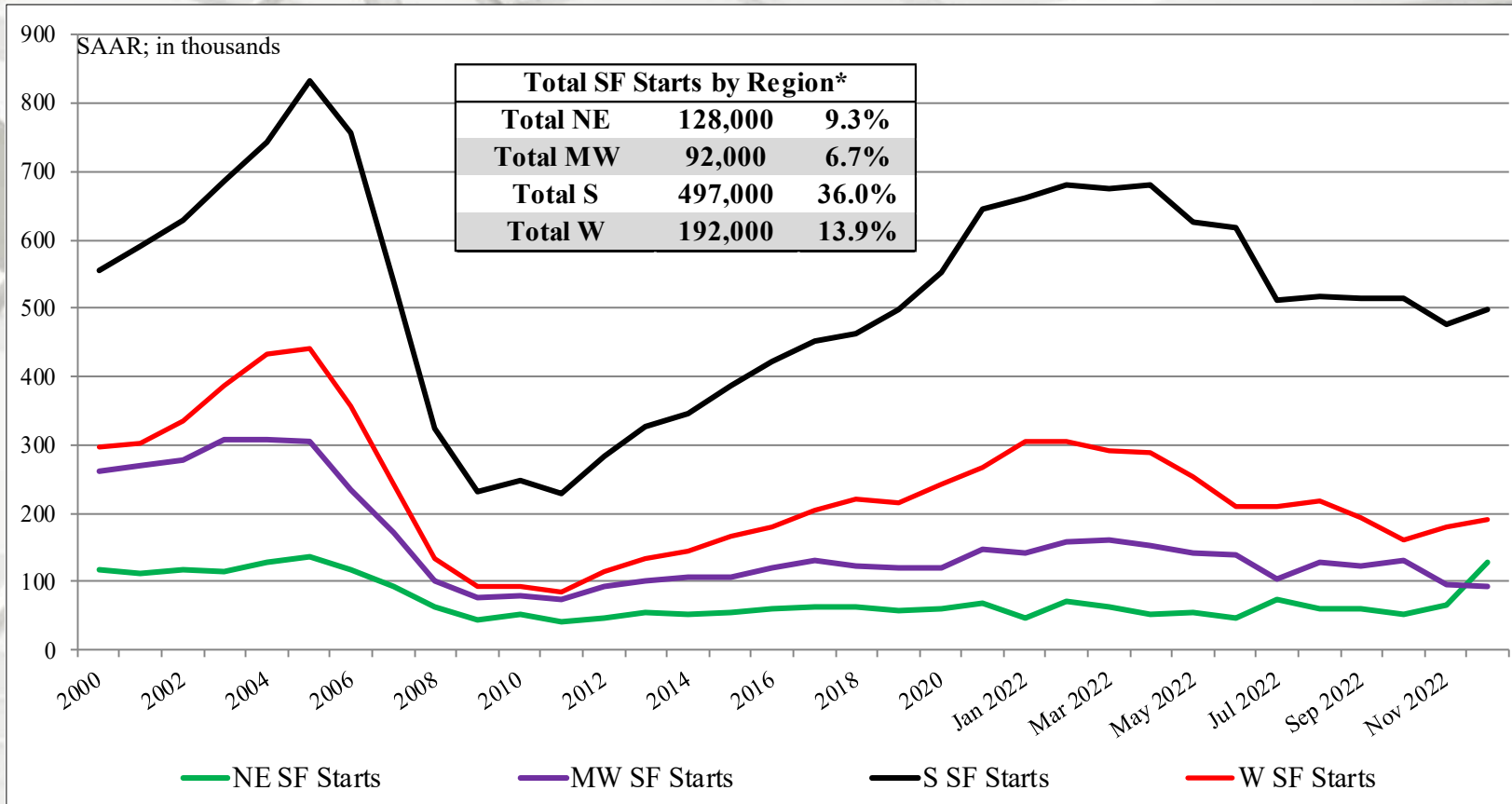


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts - (SF + ≥ 5 MF starts)).

* Percentage of total starts.

Total SF Housing Starts by Region

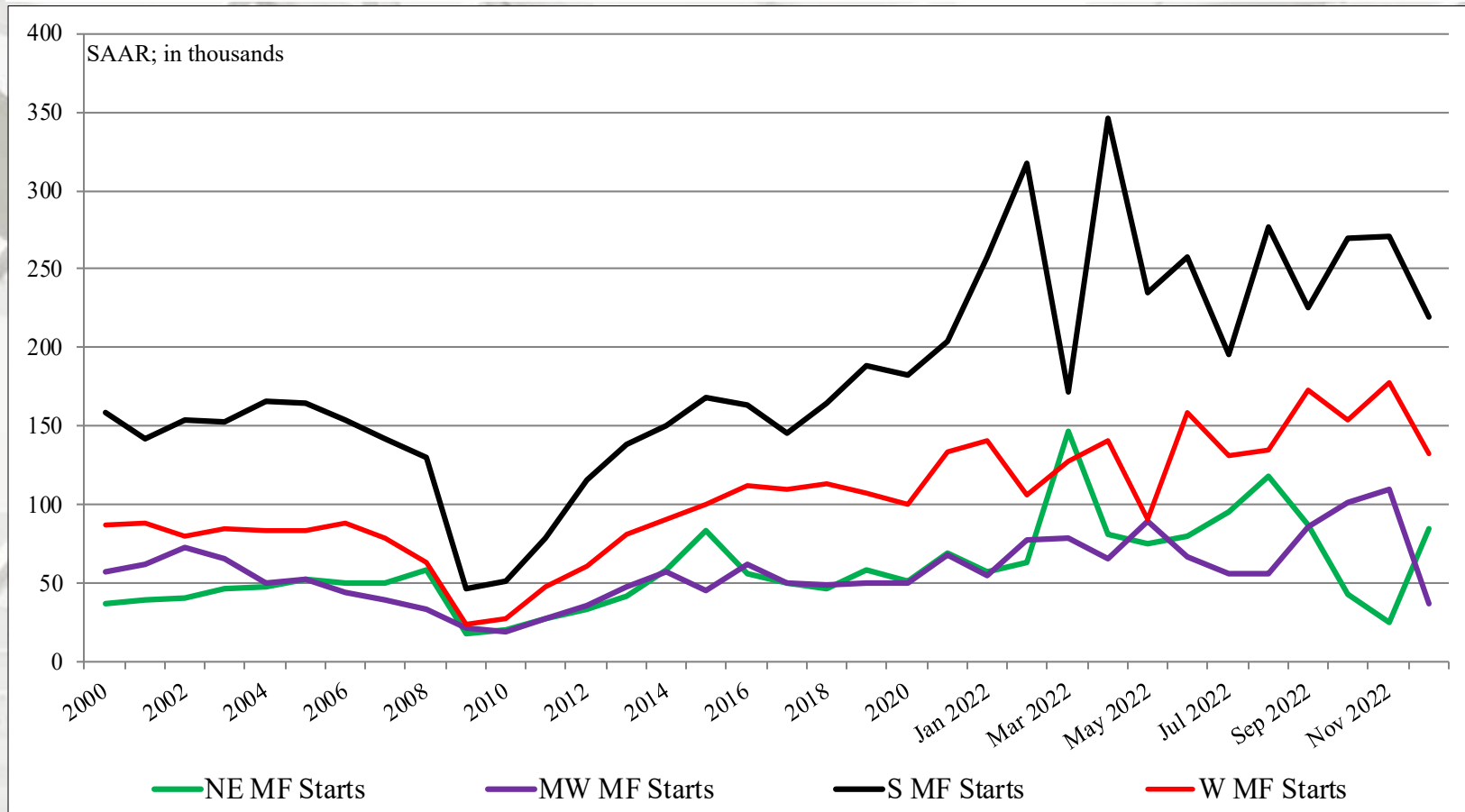


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts - (SF + ≥ 5 MF starts)).

* Percentage of total starts.

MF Housing Starts by Region

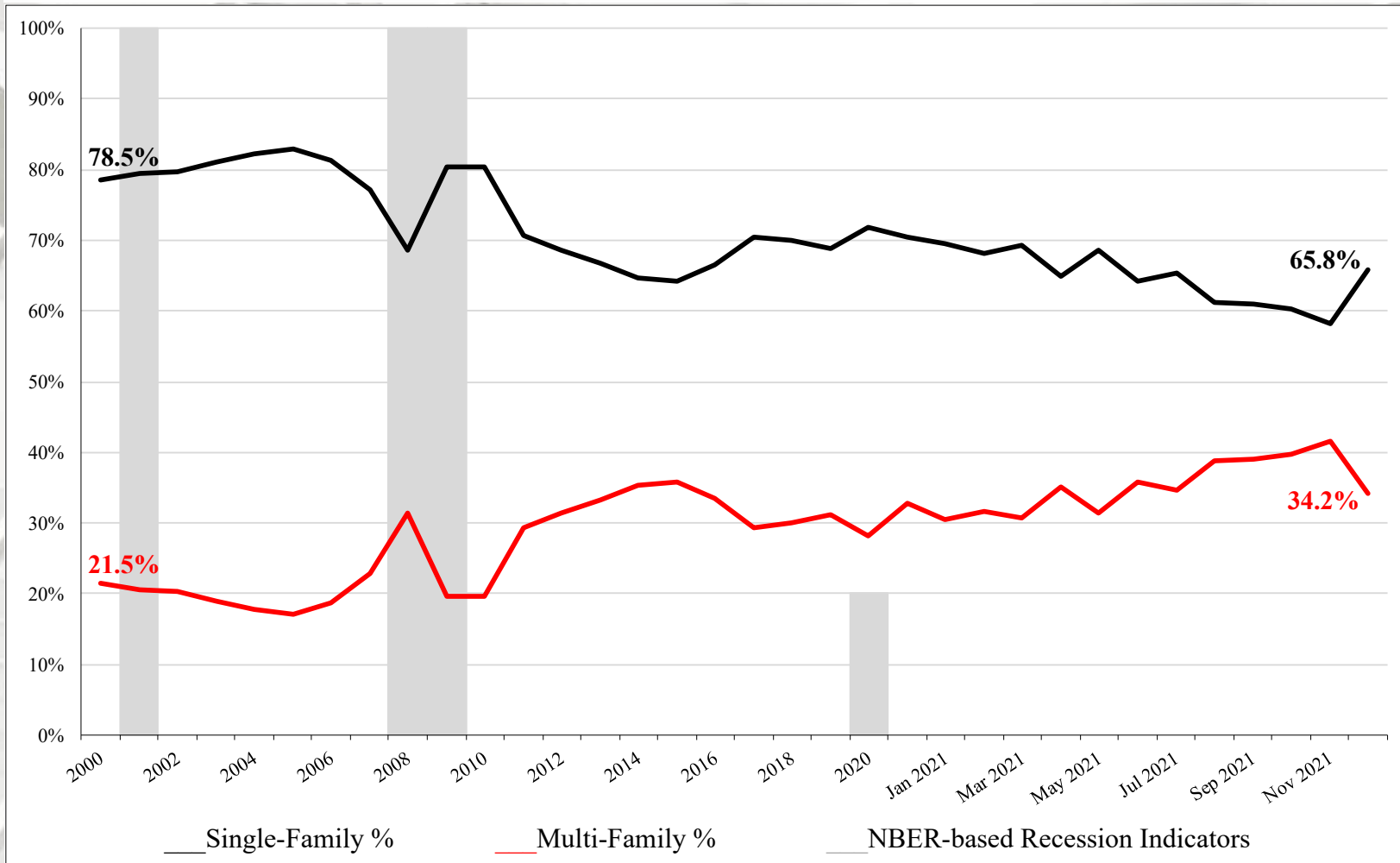


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts – (SF + ≥ 5 MF starts)).

* Percentage of total starts.

SF vs. MF Housing Starts (%)



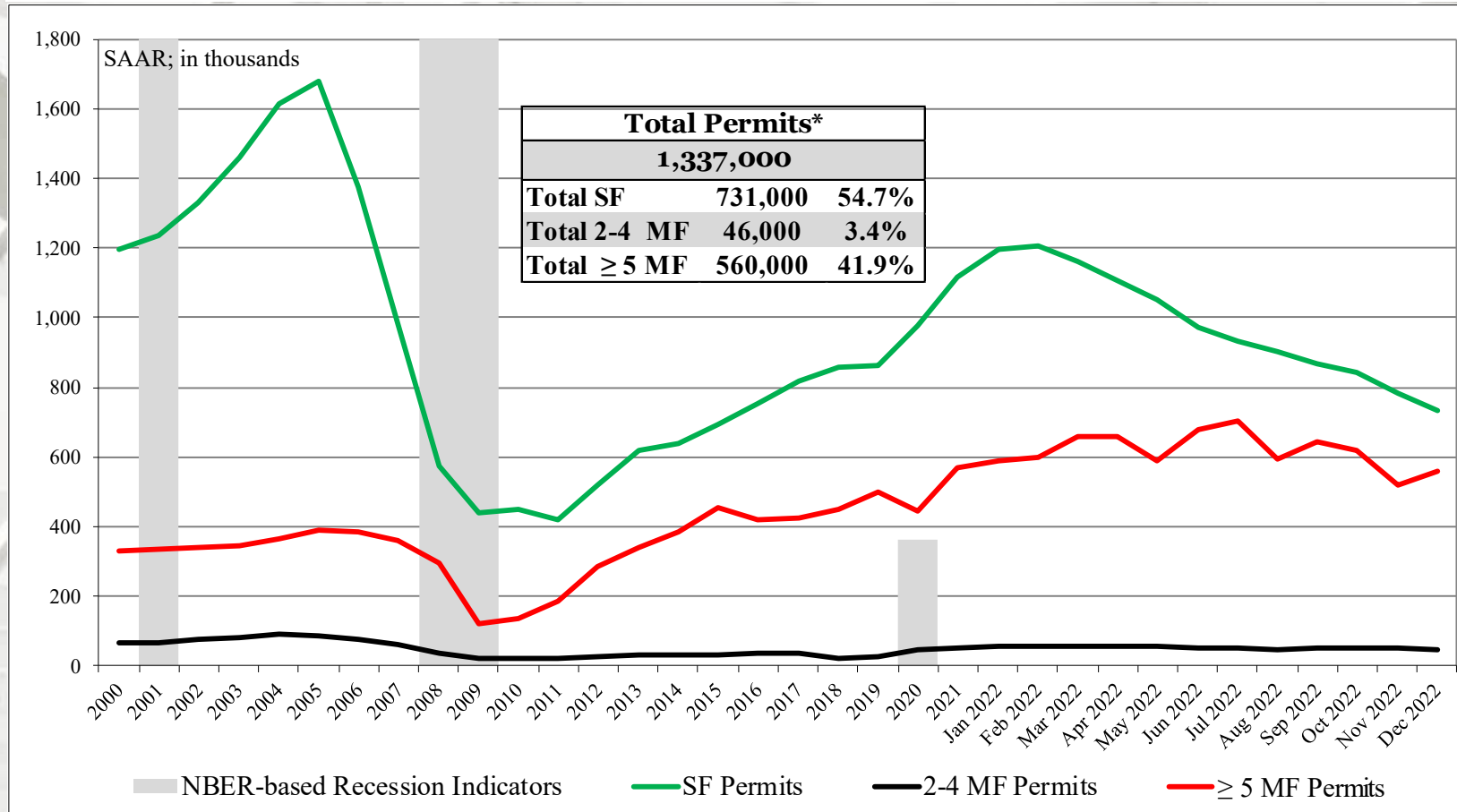
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
December	1,337,000	731,000	46,000	560,000
November	1,351,000	781,000	52,000	518,000
2021	1,896,000	1,118,000	68,000	710,000
M/M change	-1.0%	-6.4%	-11.5%	8.1%
Y/Y change	-29.5%	-34.6%	-32.4%	-21.1%

* All permit data are presented at a seasonally adjusted annual rate (SAAR).

Total New Housing Permits



* Percentage of total permits.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Permits by Region

	NE Total*	NE SF	NE MF**
December	115,000	55,000	60,000
November	118,000	51,000	67,000
2021	272,000	74,000	198,000
M/M change	-2.5%	7.8%	-10.4%
Y/Y change	-57.7%	-25.7%	-69.7%
	MW Total*	MW SF	MW MF**
December	175,000	94,000	81,000
November	199,000	100,000	99,000
2021	260,000	152,000	108,000
M/M change	-12.1%	-6.0%	-18.2%
Y/Y change	-32.7%	-38.2%	-25.0%

NE = Northeast; MW = Midwest

* All data are SAAR

** US DOC does not report multi-family permits directly; this is an estimation (Total permits – SF permits).

New Housing Permits by Region

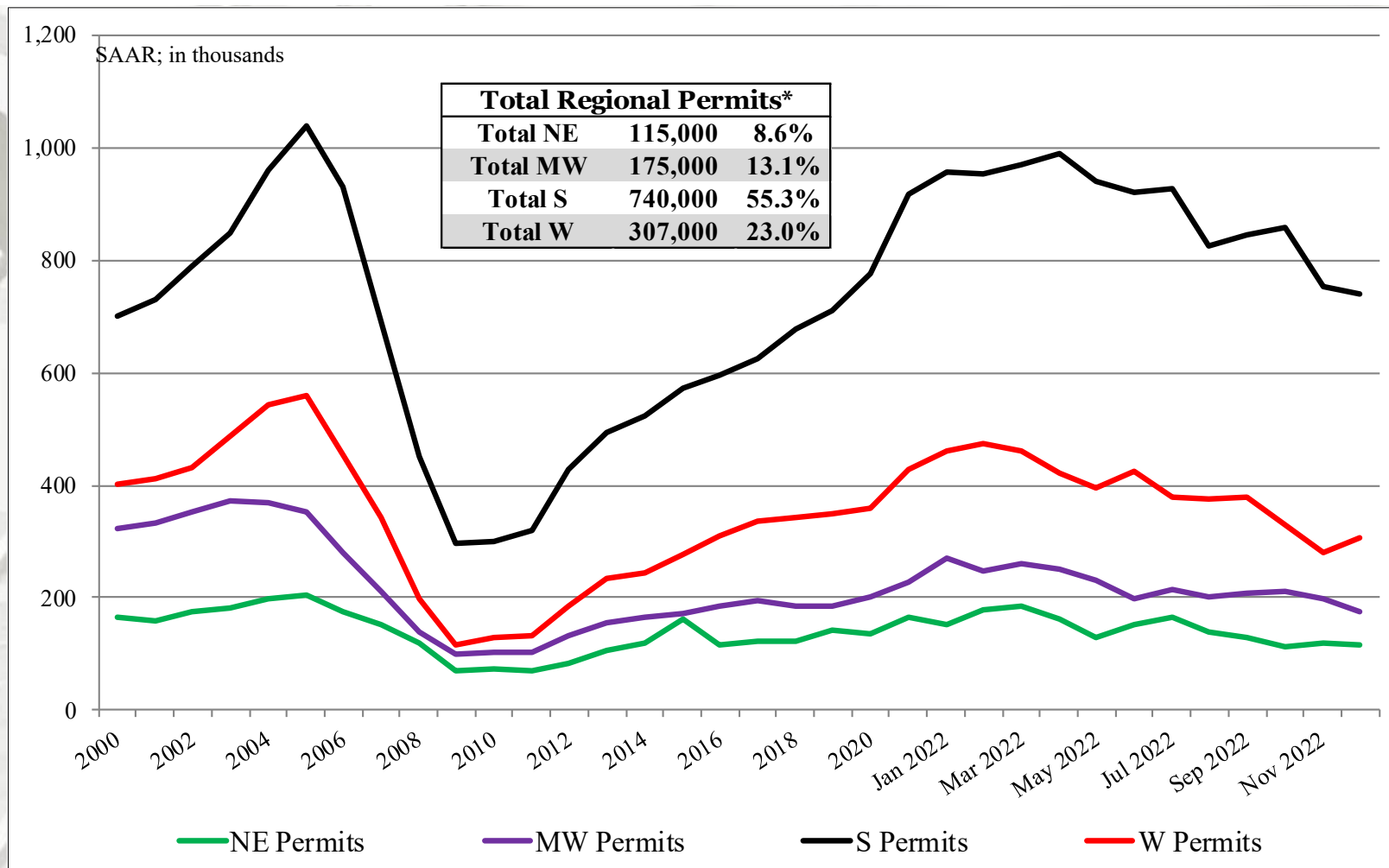
	S Total*	S SF	S MF**
December	740,000	440,000	300,000
November	753,000	475,000	278,000
2021	941,000	657,000	284,000
M/M change	-1.7%	-7.4%	7.9%
Y/Y change	-21.4%	-33.0%	5.6%
	W Total*	W SF	W MF**
December	307,000	142,000	165,000
November	281,000	155,000	126,000
2021	423,000	235,000	188,000
M/M change	9.3%	-8.4%	31.0%
Y/Y change	-27.4%	-39.6%	-12.2%

S = South; W = West

* All data are SAAR

** US DOC does not report multi-family permits directly; this is an estimation (Total permits – SF permits).

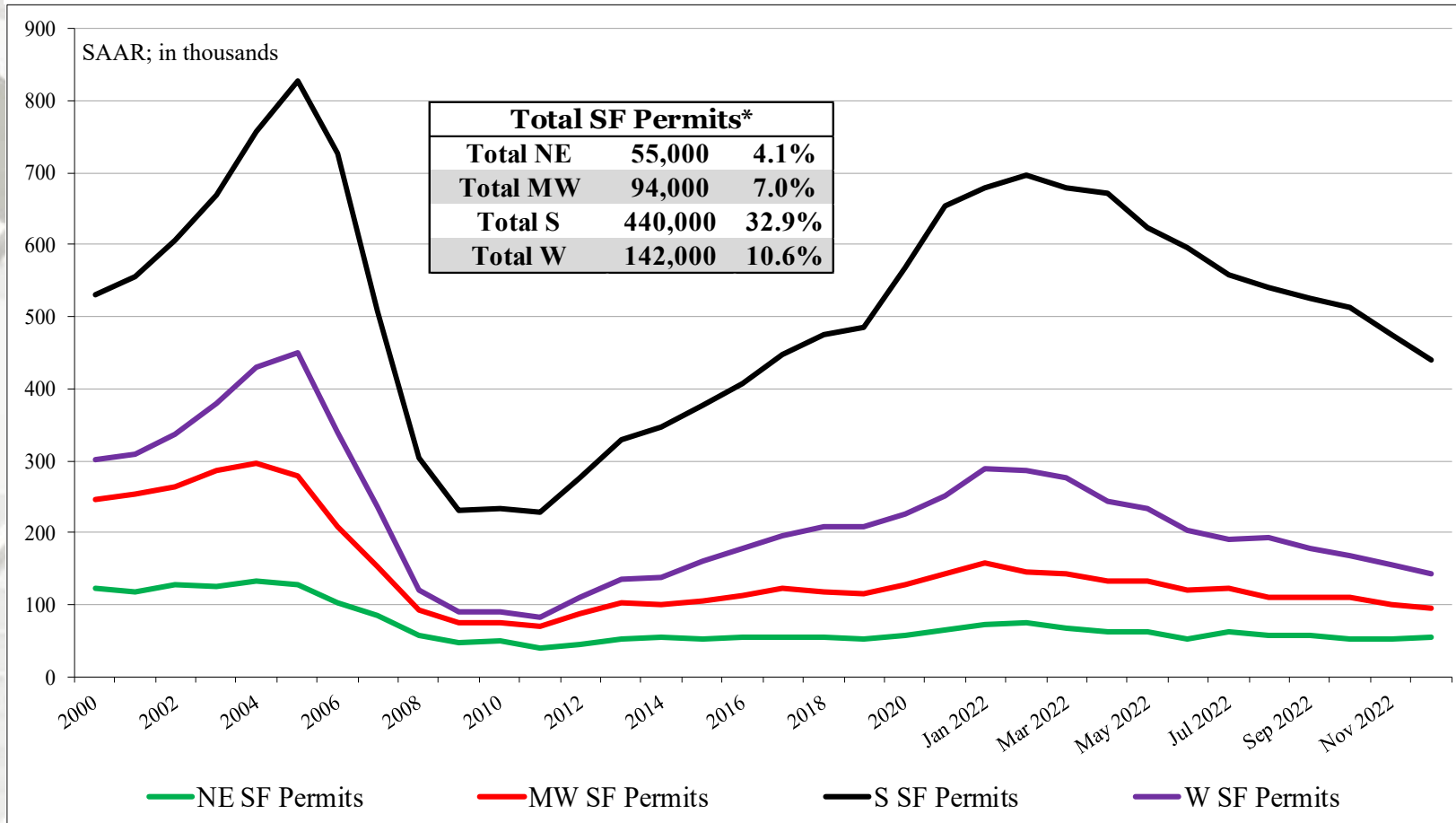
Total Housing Permits by Region



NE = Northeast, MW = Midwest, S = South, W = West

* Percentage of total permits.

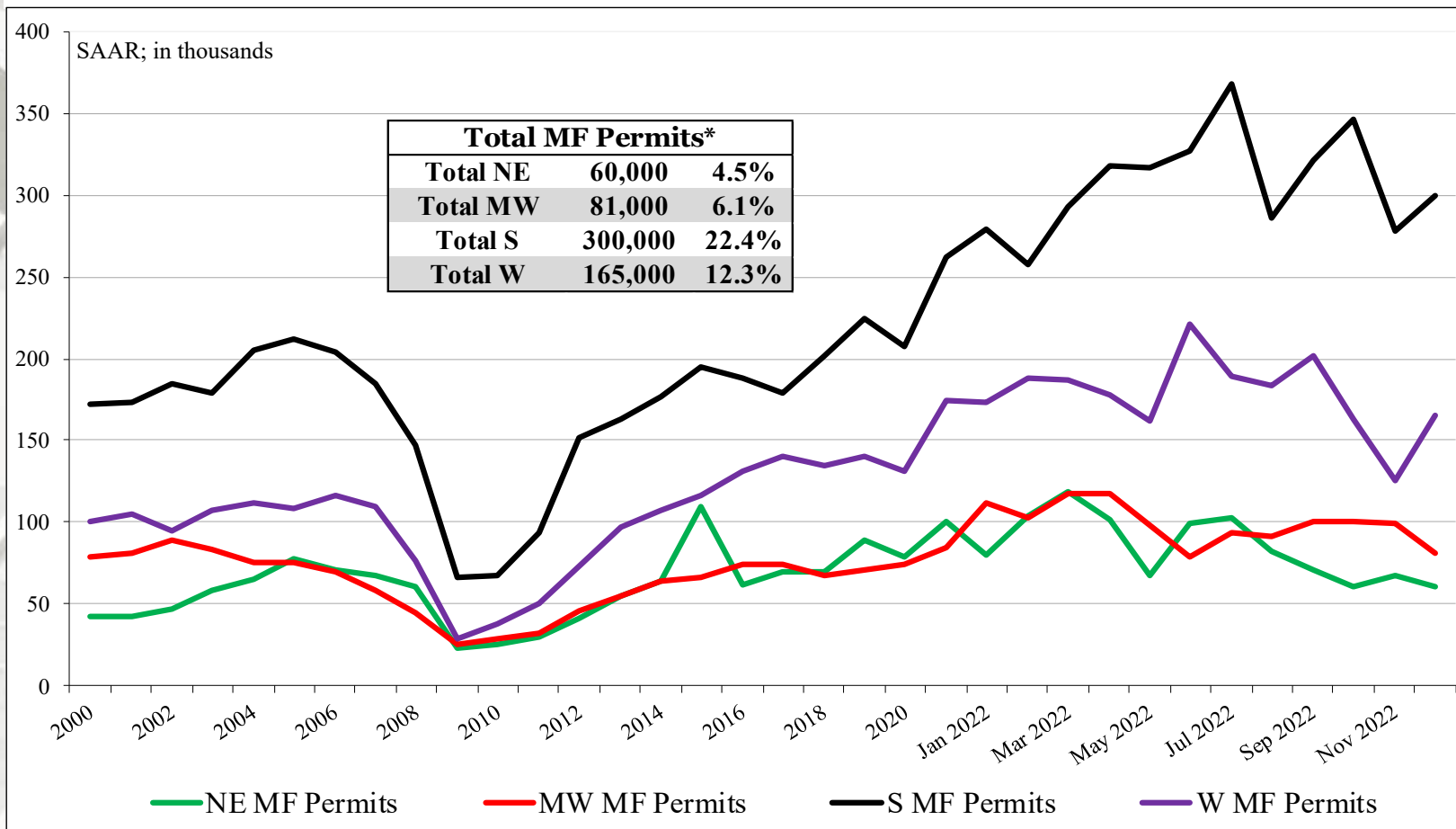
SF Housing Permits by Region



NE = Northeast, MW = Midwest, S = South, W = West

* Percentage of total permits.

MF Housing Permits by Region



NE = Northeast, MW = Midwest, S = South, W = West

* Percentage of total permits.

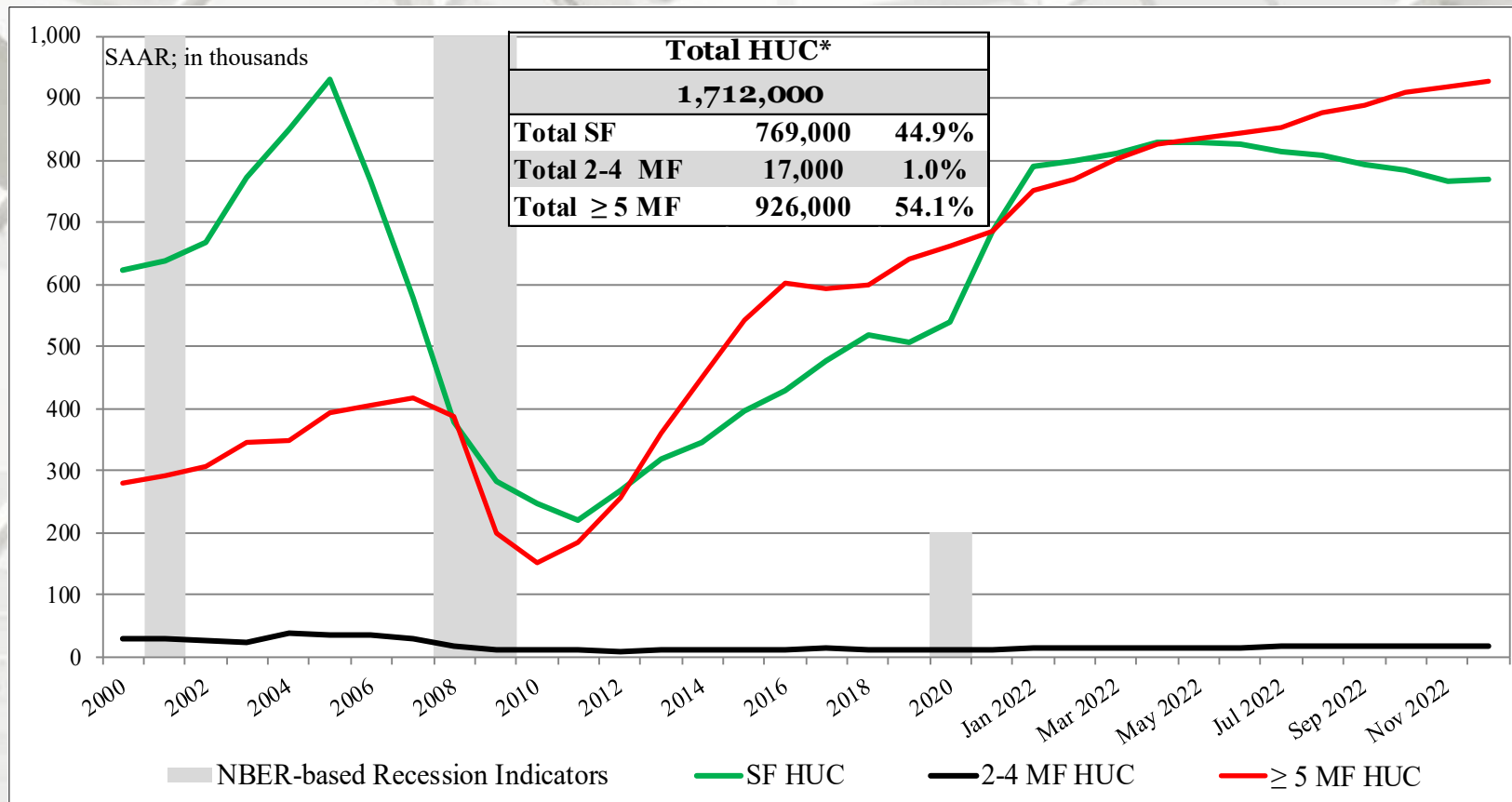
New Housing Under Construction (HUC)

	Total HUC*	SF HUC	MF 2-4 unit** HUC	MF ≥ 5 unit HUC
December	1,712,000	769,000	17,000	926,000
November	1,701,000	767,000	17,000	917,000
2021	1,525,000	770,000	13,000	742,000
M/M change	0.6%	0.3%	0.0%	1.0%
Y/Y change	12.3%	-0.1%	30.8%	24.8%

All housing under construction data are presented at a seasonally adjusted annual rate (SAAR).

** US DOC does not report 2-4 multi-family units under construction directly; this is an estimation
((Total under construction – (SF + 5-unit MF)).

Total Housing Under Construction

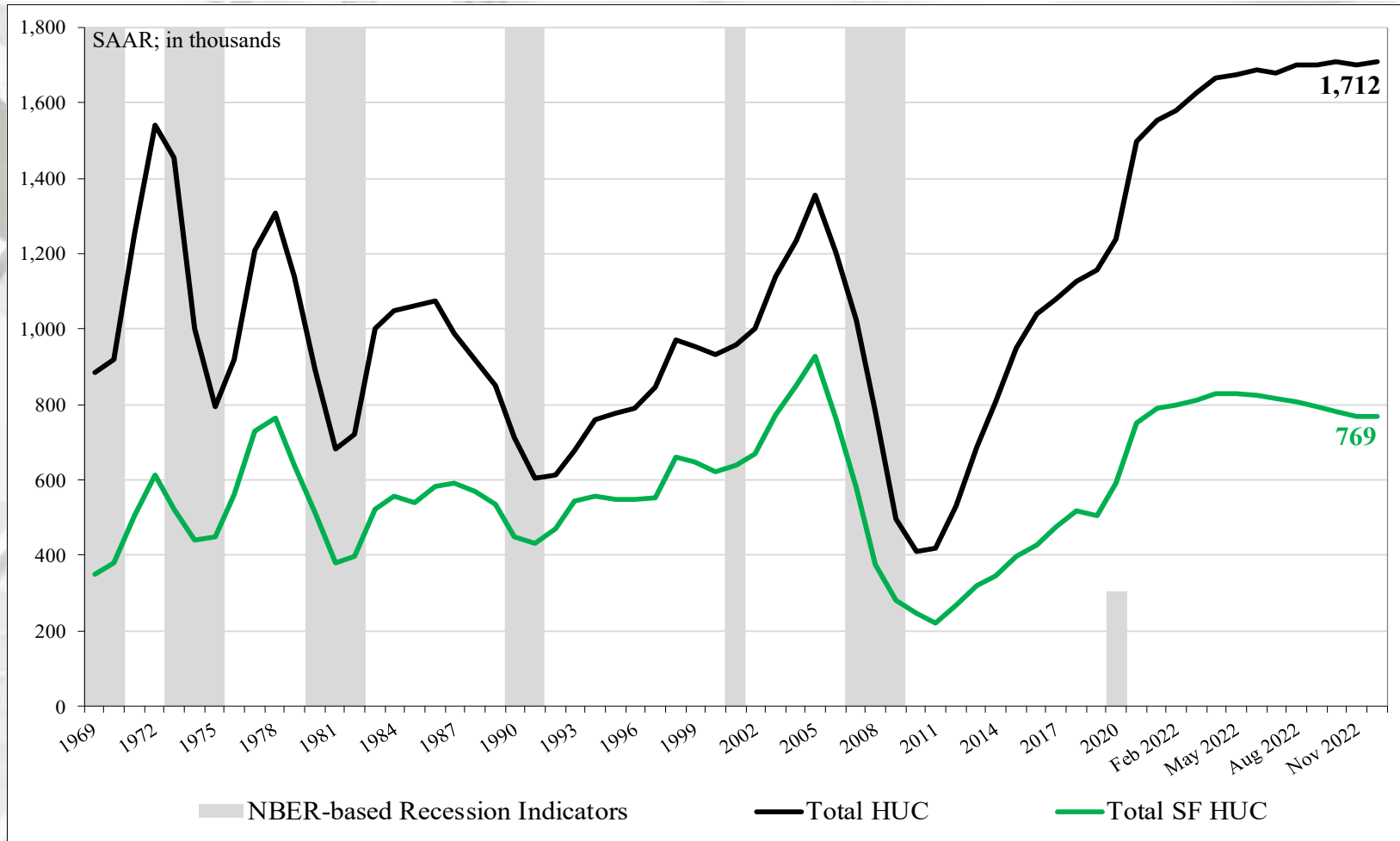


US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under constructions – (SF + 5-unit MF HUC)).

* Percentage of total housing under construction units.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Total Housing Under Construction



In December total housing units under construction (HUC) were 1,712,000 units, greater than December 1973 total of 1,628,000 units. December's SF HUC reading, 769,000 units, which was substantially less than reported for December 2006 (929,000 units).

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
December	219,000	66,000	153,000
November	212,000	62,000	150,000
2021	202,000	62,000	142,000
M/M change	3.3%	6.5%	2.0%
Y/Y change	8.4%	6.5%	7.7%
	MW Total	MW SF	MW MF
December	220,000	100,000	120,000
November	222,000	103,000	119,000
2021	197,000	107,000	90,000
M/M change	-0.9%	-2.9%	0.8%
Y/Y change	11.7%	-6.5%	33.3%

All data are SAAR; NE = Northeast and MW = Midwest.

** US DOC does not report multi-family units under construction directly; this is an estimation (Total under construction – SF under construction).

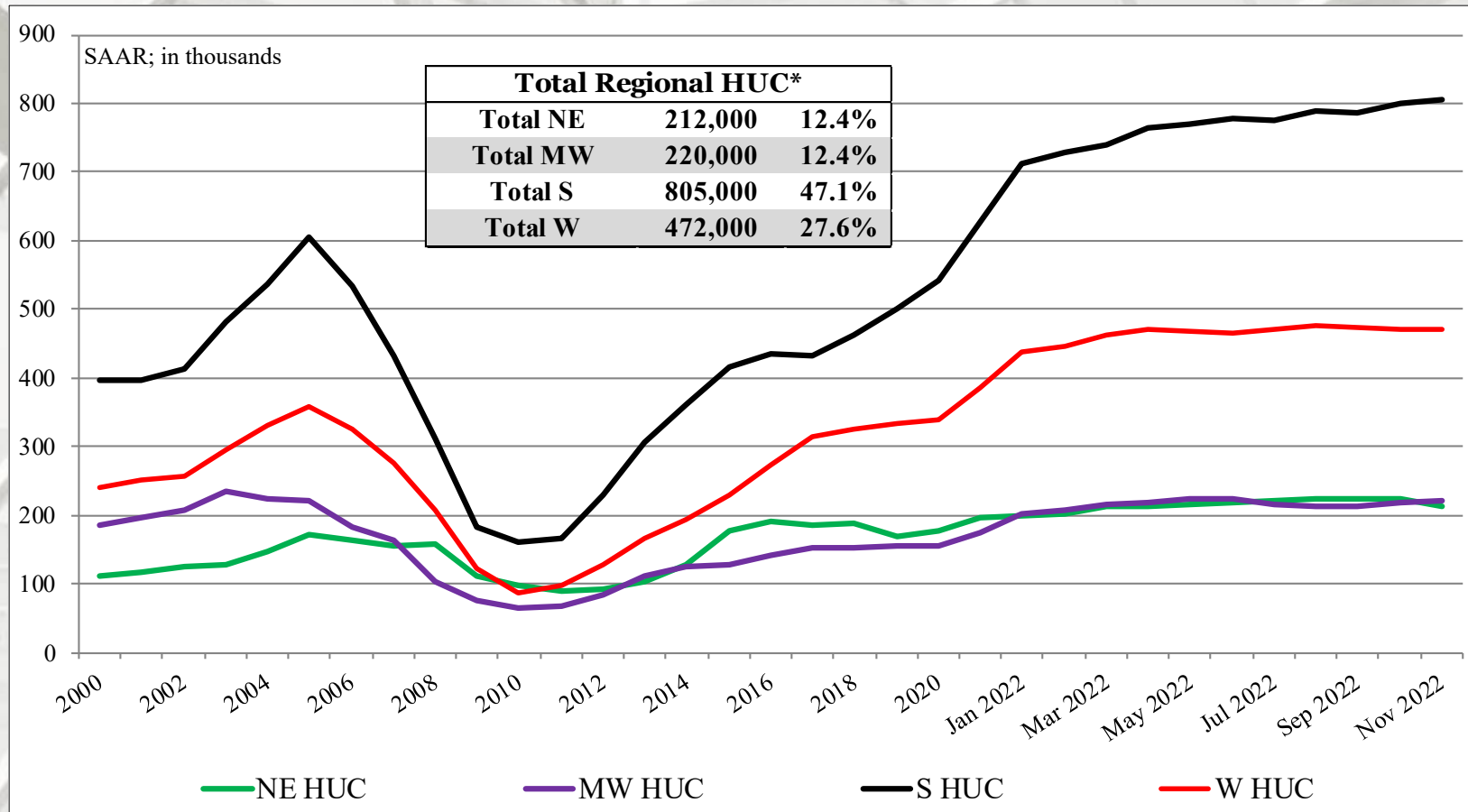
New Housing Under Construction by Region

	S Total	S SF	S MF**
December	798,000	409,000	389,000
November	797,000	409,000	388,000
2021	697,000	404,000	293,000
M/M change	0.1%	0.0%	0.3%
Y/Y change	14.5%	1.2%	32.8%
	W Total	W SF	W MF
December	475,000	194,000	281,000
November	470,000	193,000	277,000
2021	429,000	197,000	232,000
M/M change	1.1%	0.5%	1.4%
Y/Y change	10.7%	-1.5%	21.1%

All data are SAAR; S = South and W = West.

** US DOC does not report multi-family units under construction directly; this is an estimation
(Total under construction – SF under construction).

Total Housing Under Construction by Region

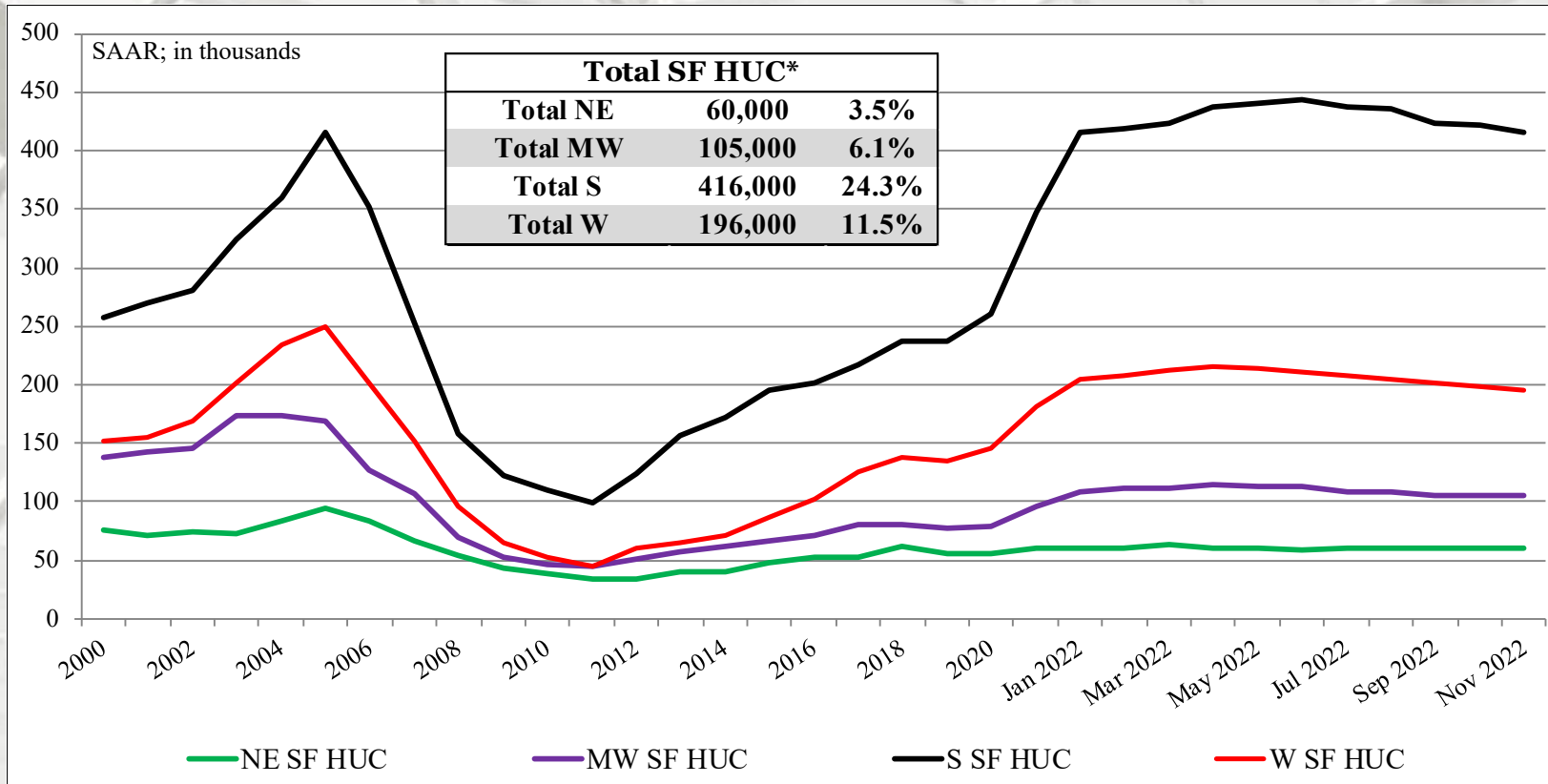


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family under construction directly; this is an estimation (Total under construction – (SF + 5-unit MF under construction)).

* Percentage of total housing under construction units.

SF Housing Under Construction by Region

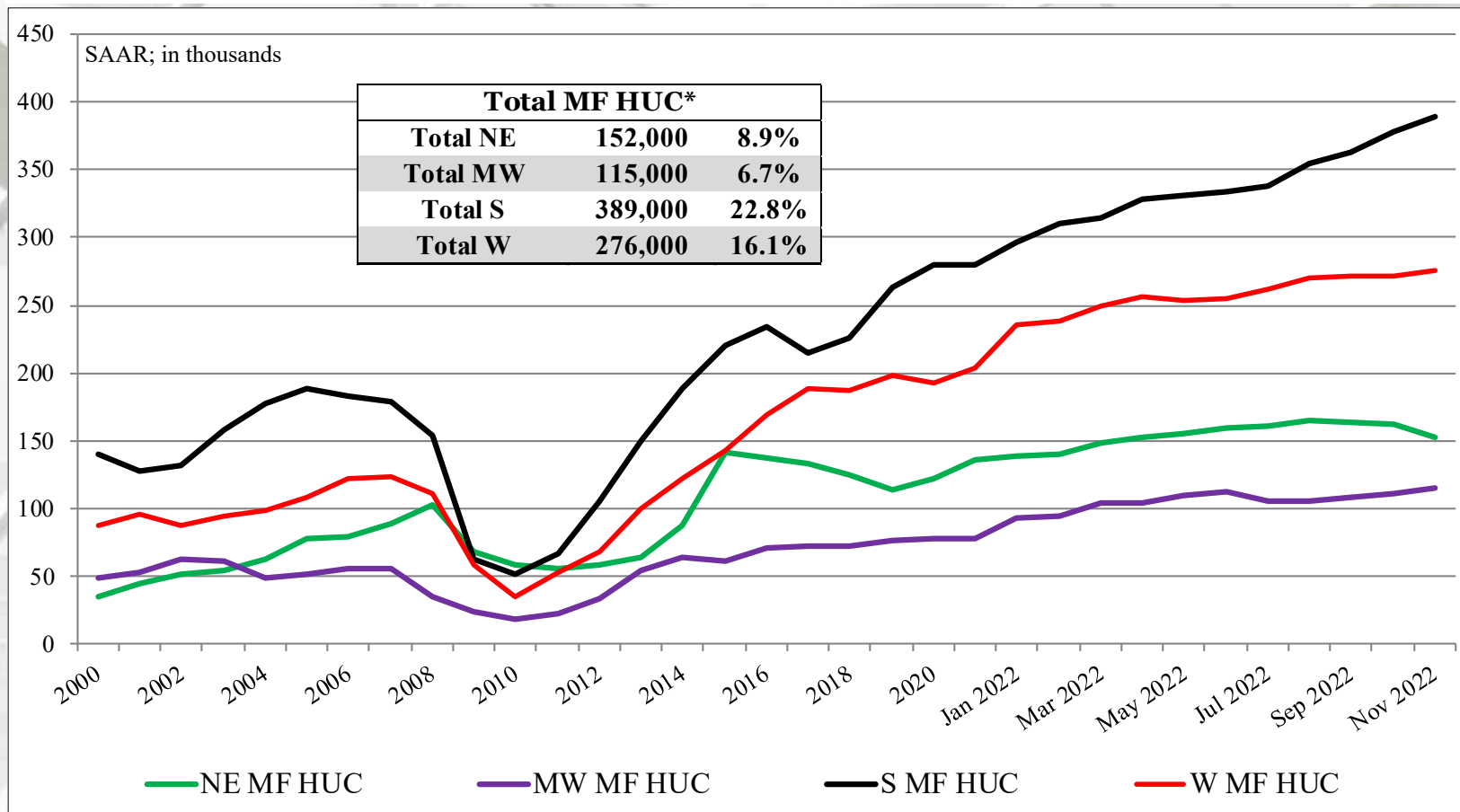


NE = Northeast, MW = Midwest, S = South, W = West.

US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under construction – (SF + 5-unit MF under construction)).

* Percentage of total housing under construction units.

MF Housing Under Construction by Region



NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family under construction directly; this is an estimation (Total under construction – (SF + 5-unit MF under construction)).

* Percentage of total housing under construction units.

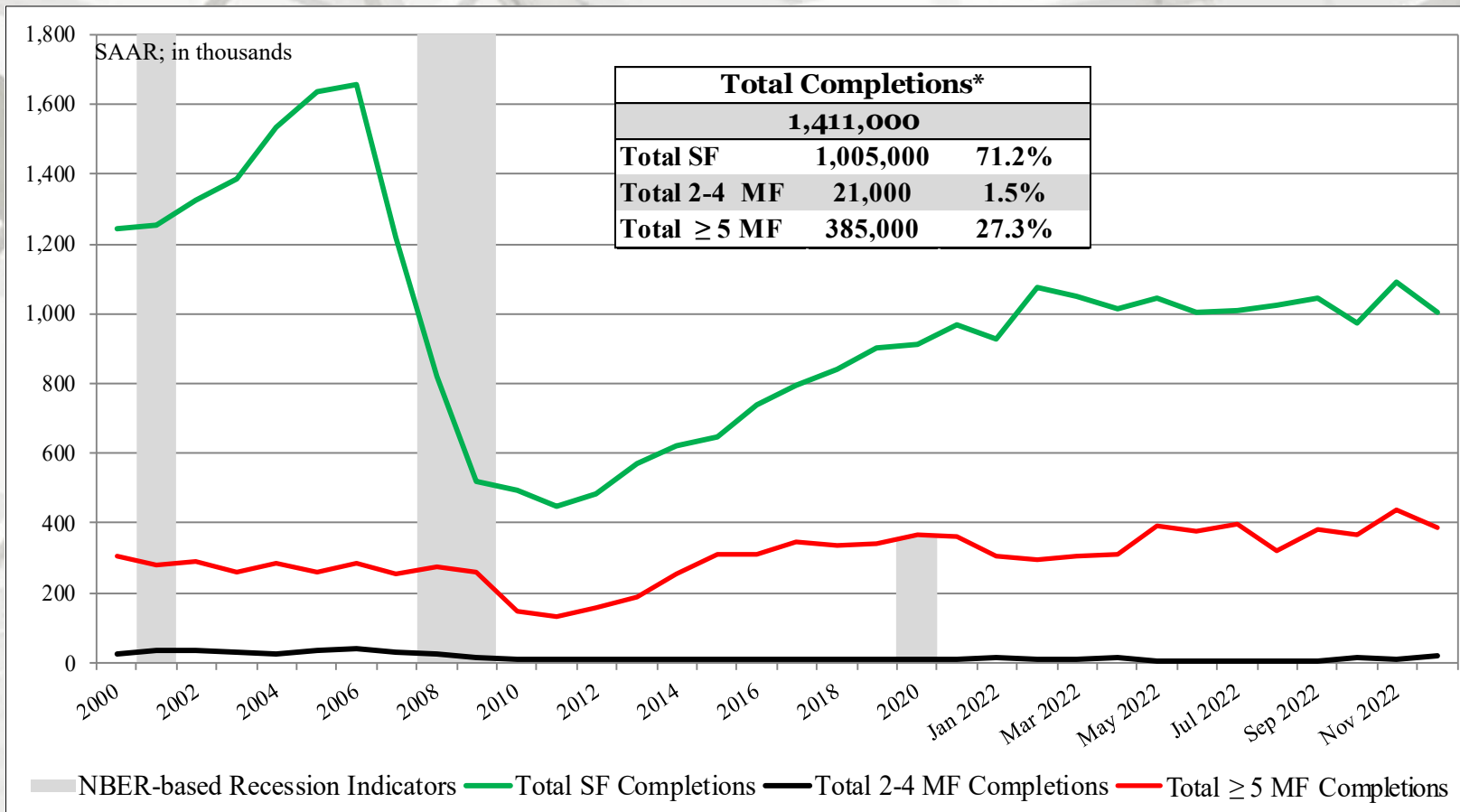
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
December	1,411,000	1,005,000	21,000	385,000
November	1,540,000	1,092,000	10,000	438,000
2021	1,326,000	1,014,000	6,000	306,000
M/M change	-8.4%	-8.0%	110.0%	-12.1%
Y/Y change	6.4%	-0.9%	250.0%	25.8%

* All completion data are presented at a seasonally adjusted annual rate (SAAR).

** US DOC does not report multi-family completions directly; this is an estimation ((Total completions – (SF + ≥ 5-unit MF)).

Total Housing Completions



US DOC does not report multifamily completions directly, this is an estimation ((Total completions – (SF + + 5-unit MF)).

* Percentage of total housing completions

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Completions by Region

	NE Total	NE SF	NE MF**
December	111,000	60,000	51,000
November	219,000	55,000	164,000
2021	120,000	66,000	54,000
M/M change	-49.3%	9.1%	-68.9%
Y/Y change	-7.5%	-9.1%	-5.6%
	MW Total	MW SF	MW MF
December	186,000	139,000	47,000
November	198,000	132,000	66,000
2021	171,000	105,000	66,000
M/M change	-6.1%	5.3%	-28.8%
Y/Y change	8.8%	32.4%	-28.8%

NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

New Housing Completions by Region

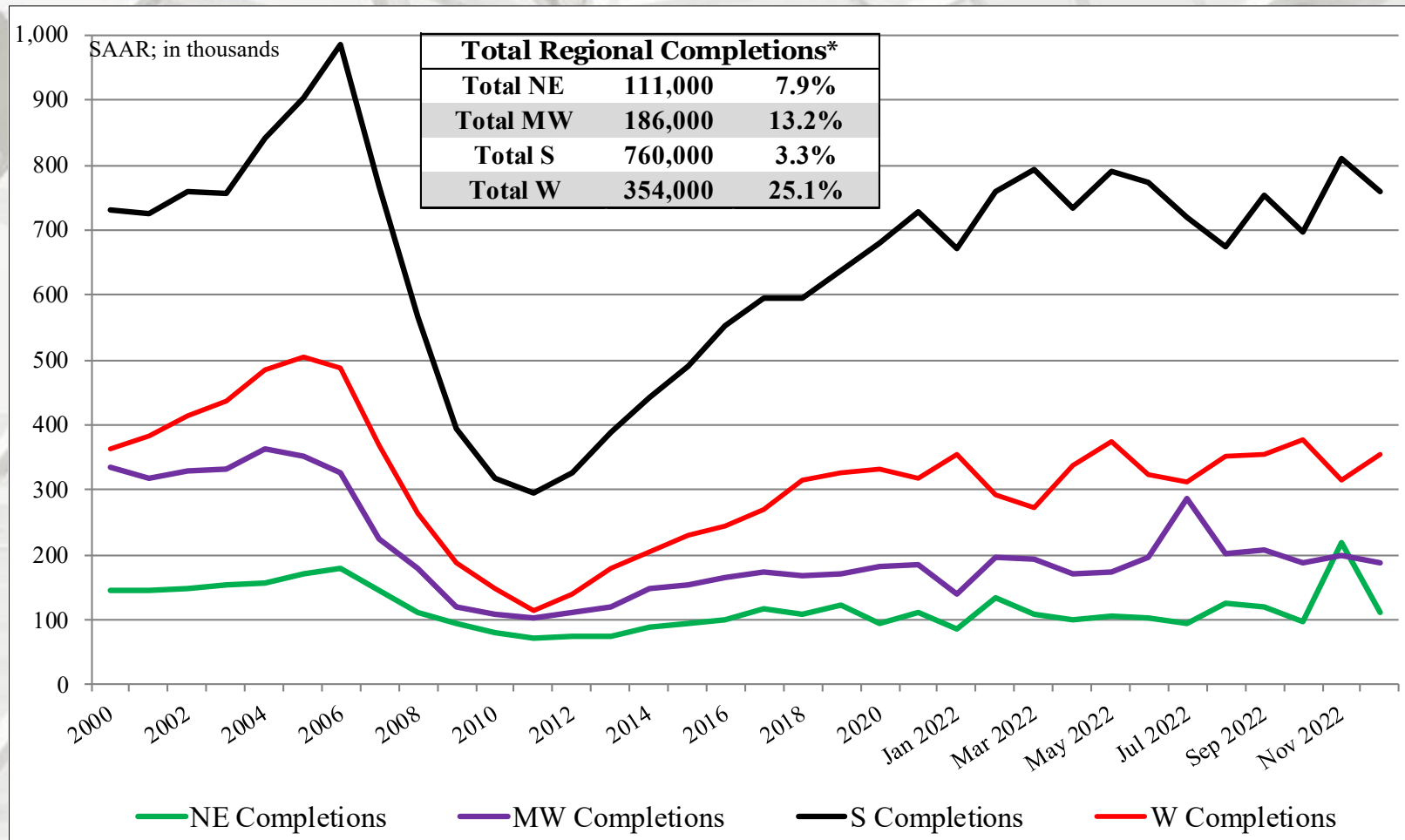
	S Total	S SF	S MF**
December	760,000	579,000	181,000
November	809,000	674,000	135,000
2021	747,000	600,000	147,000
M/M change	-6.1%	-14.1%	34.1%
Y/Y change	1.7%	-3.5%	23.1%
	W Total	W SF	W MF
December	354,000	227,000	127,000
November	314,000	231,000	83,000
2021	288,000	243,000	45,000
M/M change	12.7%	-1.7%	53.0%
Y/Y change	22.9%	-6.6%	182.2%

NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

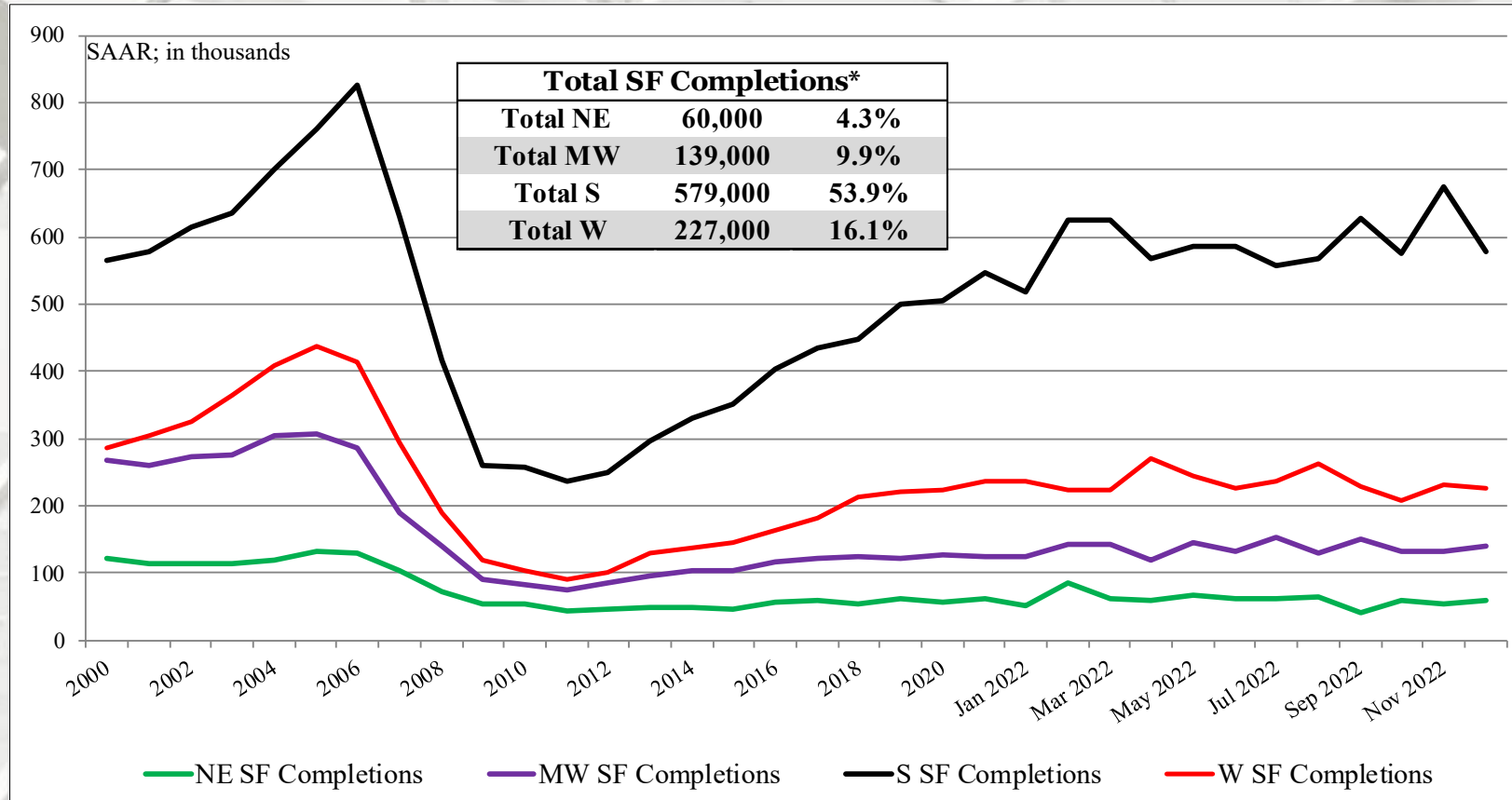
Total Housing Completions by Region



All data are SAAR; NE = Northeast and MW = Midwest; S = South, W = West

** US DOC does not report multi-family unit completions directly; this is an estimation (Total completions – SF completions).

SF Housing Completions by Region

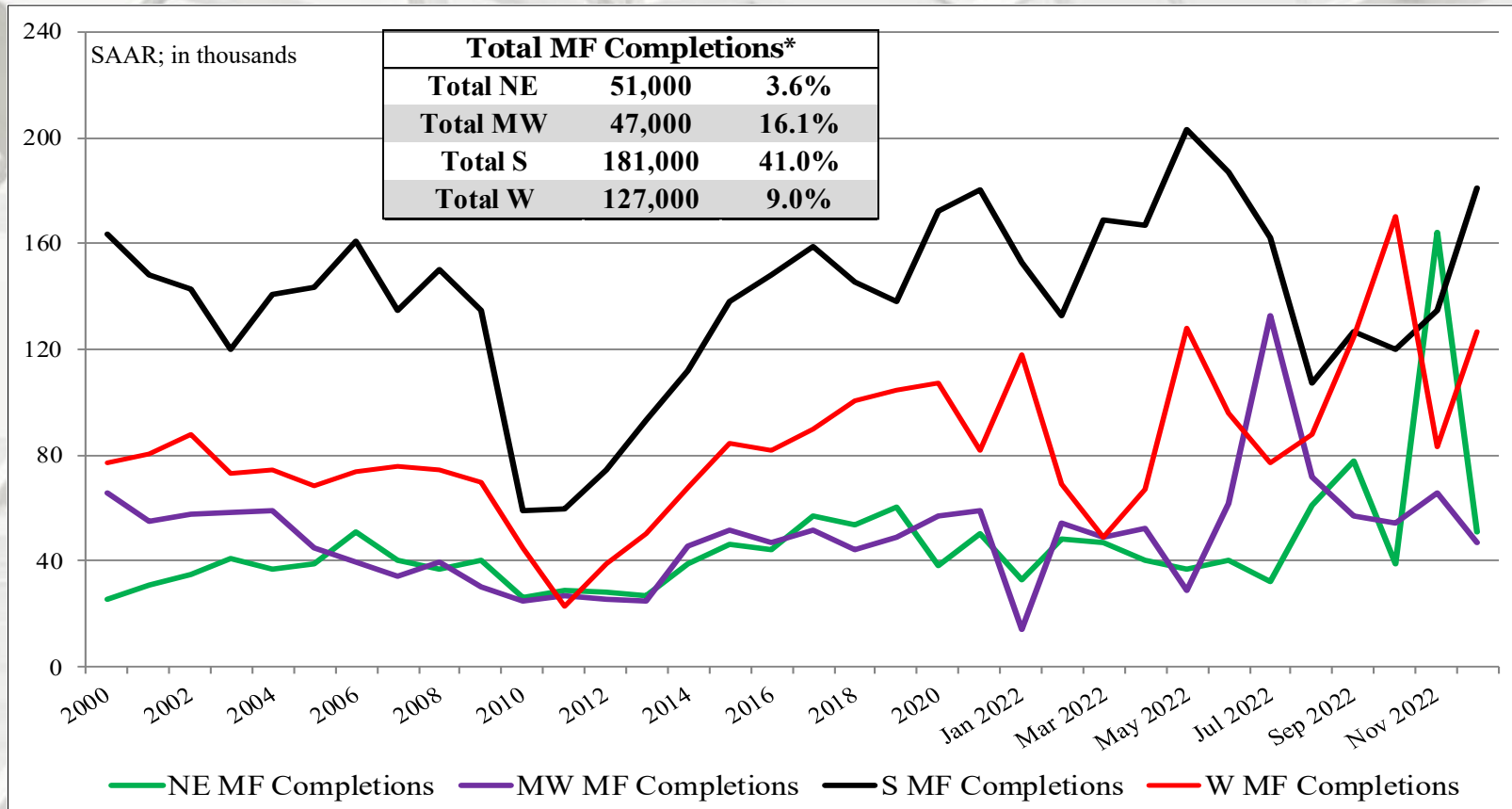


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

MF Housing Completions by Region

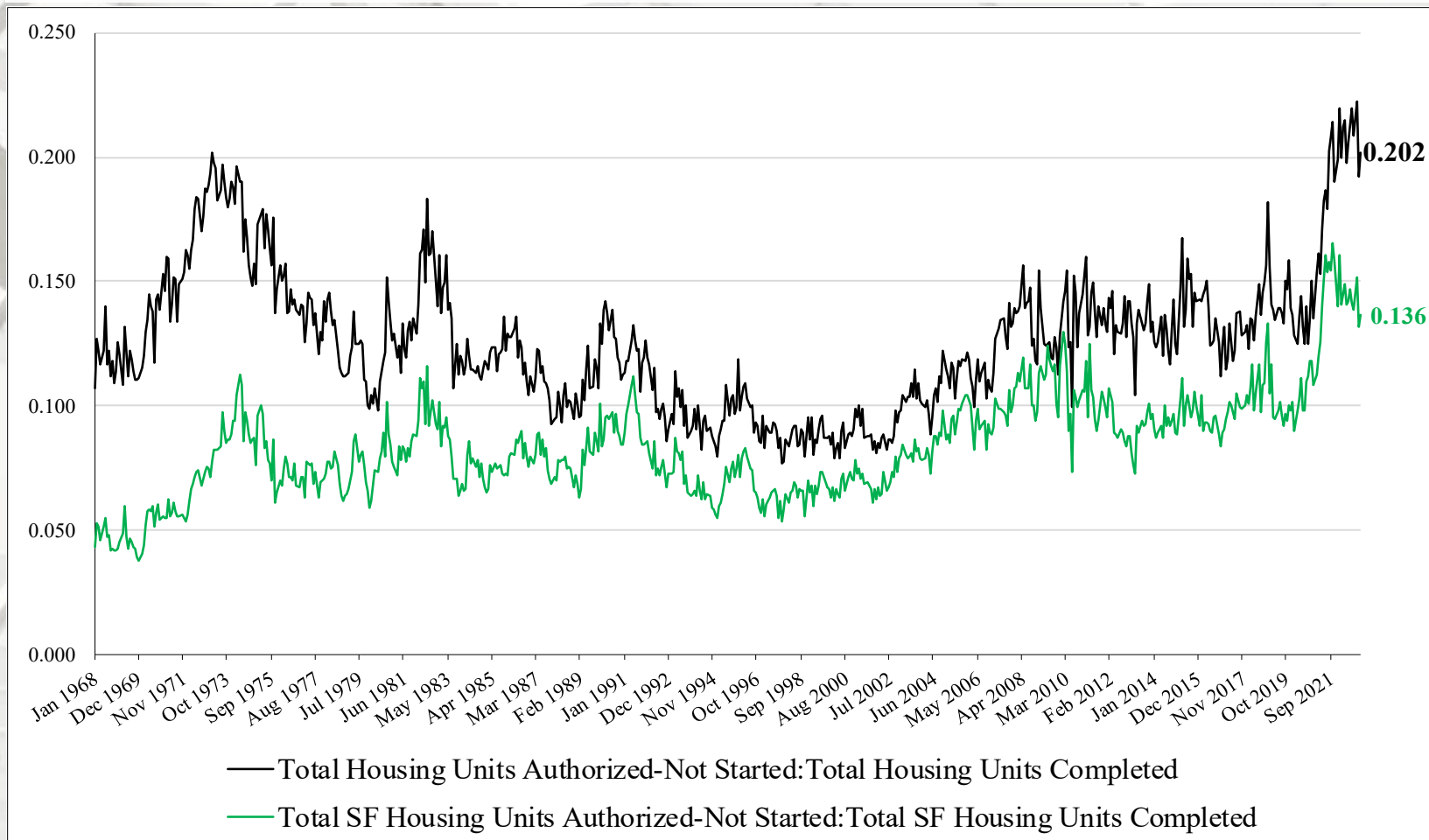


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

Ratio of Housing Units Authorized & Not Started to Housing Units Completed: M/M



Authorized, Not Started vs. Housing Completions

Total authorized units “not” started decreased to 285,000 in December and SF authorized units “not” started decreased to 137,000 in December.

The primary reason is manufacturing supply chain disruptions – ranging from appliances to windows; labor, logistics, and local building regulations.

New Single-Family House Sales

	New SF Sales*	Median Price	Mean Price	Month's Supply
December	616,000	\$442,100	\$528,400	9.0
November	602,000	\$459,000	\$528,600	9.2
2021	839,000	\$410,000	\$491,000	5.6
M/M change	2.3%	-3.7%	0.0%	-2.2%
Y/Y change	-26.6%	7.8%	7.6%	60.7%

* All new sales data are presented at a seasonally adjusted annual rate (SAAR)¹ and housing prices are adjusted at irregular intervals².

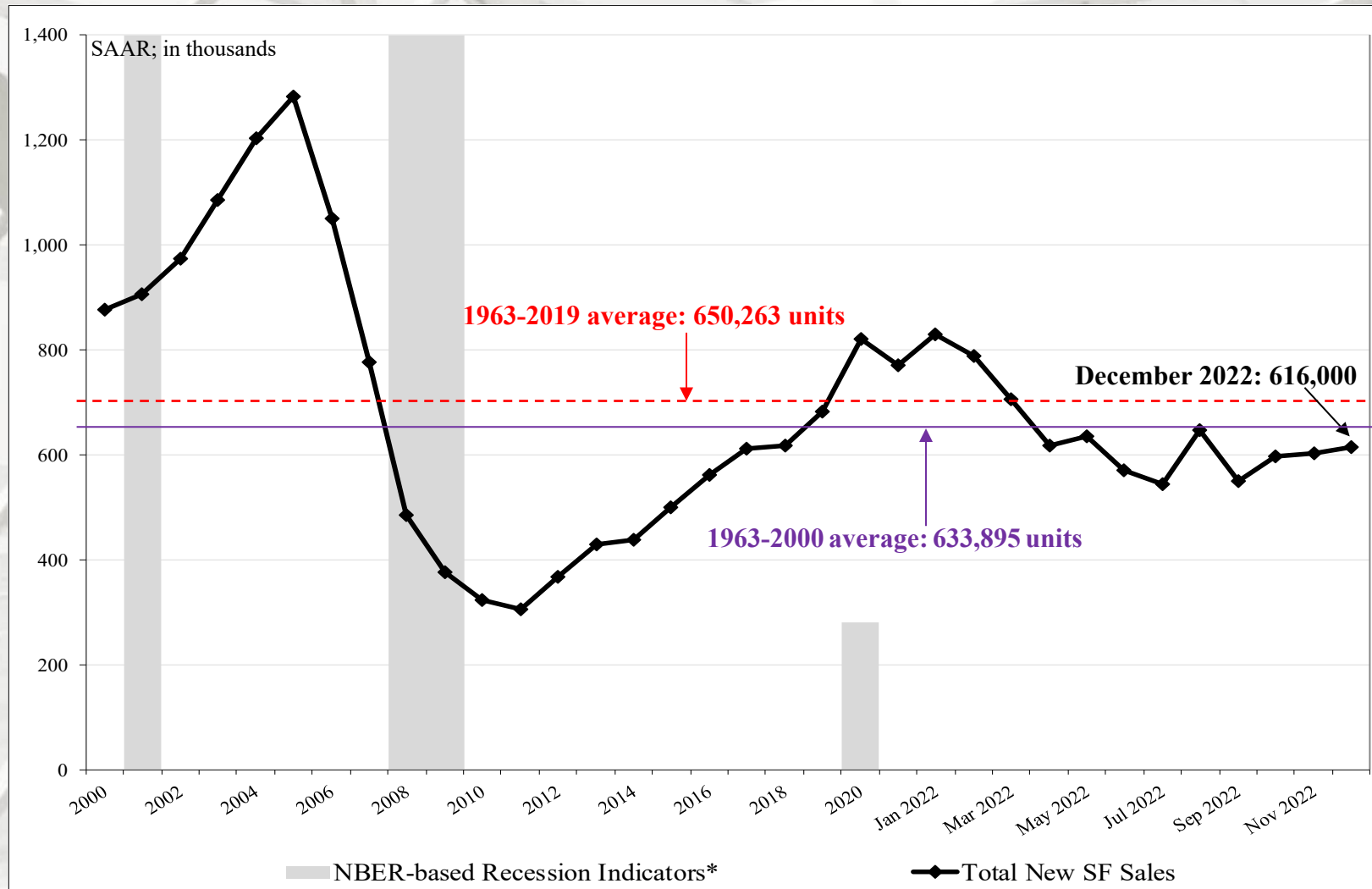
New SF sales were near the consensus forecast³ of 614 m (range: 589 m to 640 m). The past three month's new SF sales data also were revised:

September initial: 603 m, revised to 550 m.

October initial: 632 m, revised to 598 m.

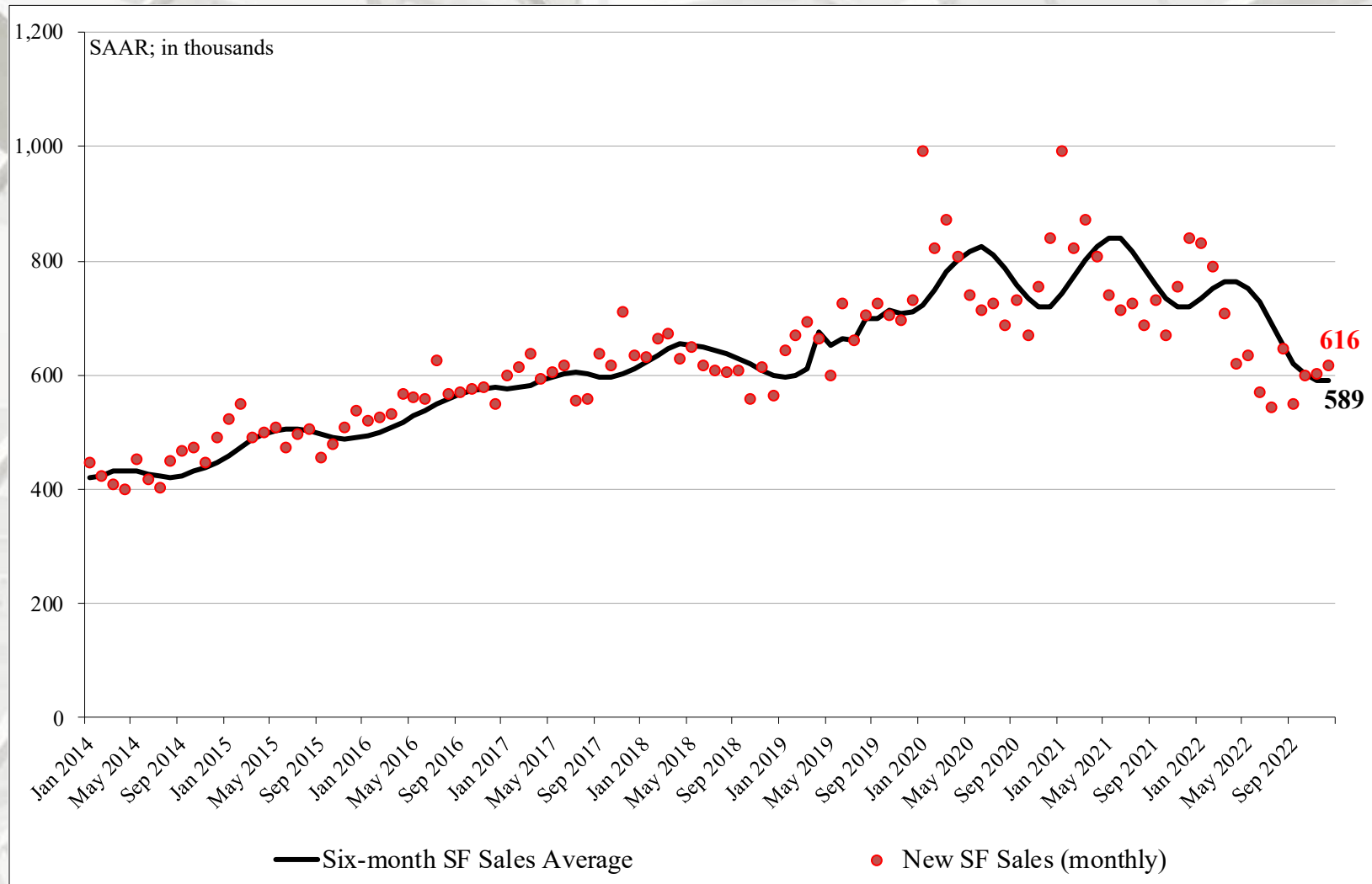
November initial: 640 m, revised to 602 m.

New SF House Sales



* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF Housing Sales: Six-month average & monthly



New SF House Sales by Region and Price Category

	NE	MW	S	W			
December	29,000	73,000	392,000	122,000			
November	36,000	54,000	368,000	144,000			
2021	37,000	85,000	475,000	242,000			
M/M change	-19.4%	35.2%	6.5%	-15.3%			
Y/Y change	-21.6%	-14.1%	-17.5%	-49.6%			
	\$150 - ≤ \$150m	\$200 - \$199.9m	\$300 - 299.9m	\$400 - \$399.9m	\$500 - \$499.9m	\$750 - \$749.9m	≥ \$750m
December ^{1,2,3,4}	500	500	5,000	15,000	9,000	14,000	4,000
November	500	500	3,000	13,000	10,000	10,000	6,000
2021	500	1,000	10,000	18,000	12,000	13,000	7,000
M/M change	0.0%	0.0%	66.7%	15.4%	-10.0%	40.0%	-33.3%
Y/Y change	0.0%	-50.0%	-50.0%	-16.7%	-25.0%	7.7%	-42.9%
New SF sales: %	1.1%	1.1%	10.6%	31.9%	19.1%	29.8%	8.5%

NE = Northeast; MW = Midwest; S = South; W = West

¹ All data are SAAR

² Houses for which sales price were not reported have been distributed proportionally to those for which sales price was reported;

³ Detail December not add to total because of rounding.

⁴ Housing prices are adjusted at irregular intervals.

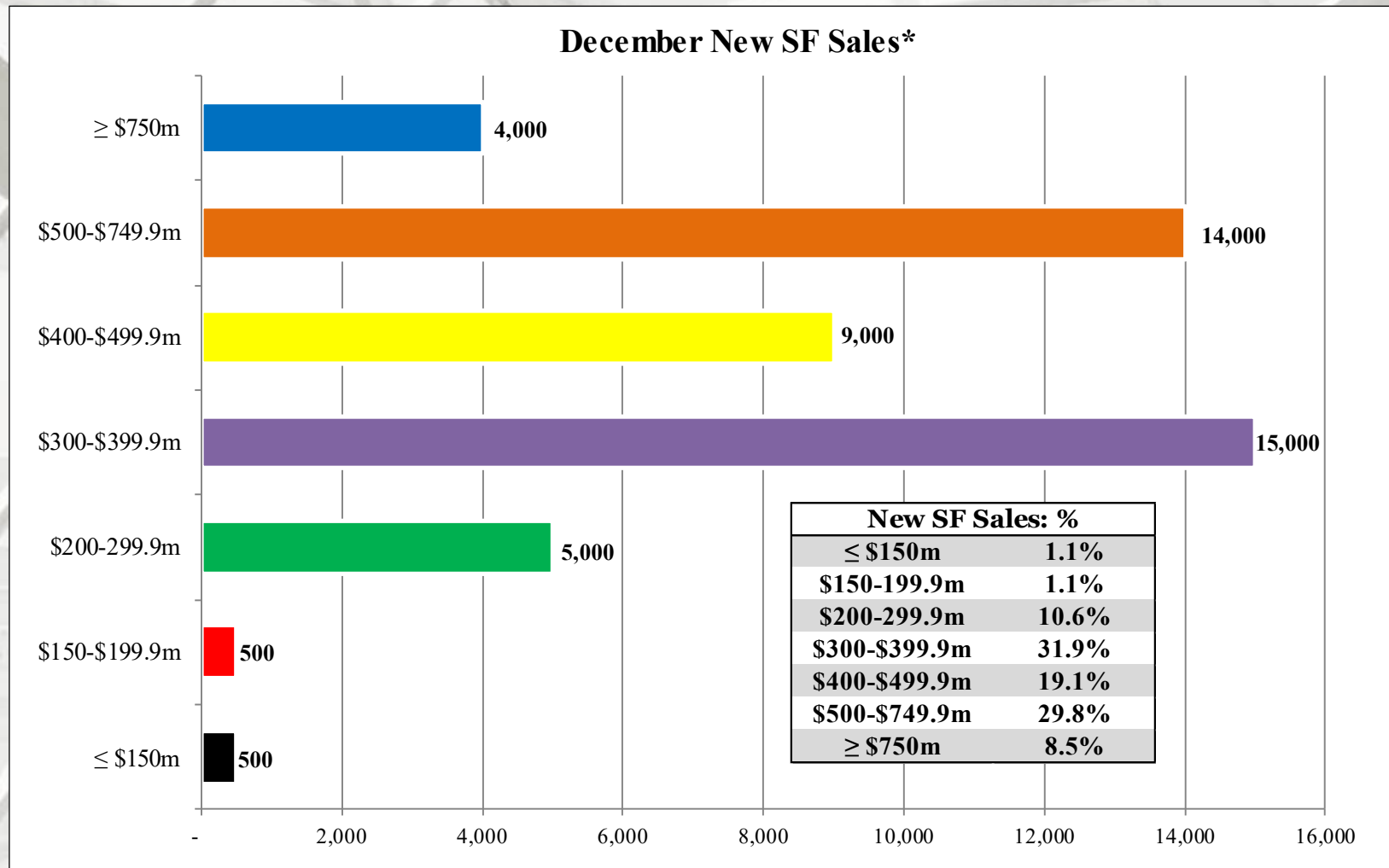
⁵ Z = Less than 500 units or less than 0.5 percent

Sources: ^{1,2,3} <https://www.census.gov/construction/nrs/index.html>; 1/26/23;

⁴ https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

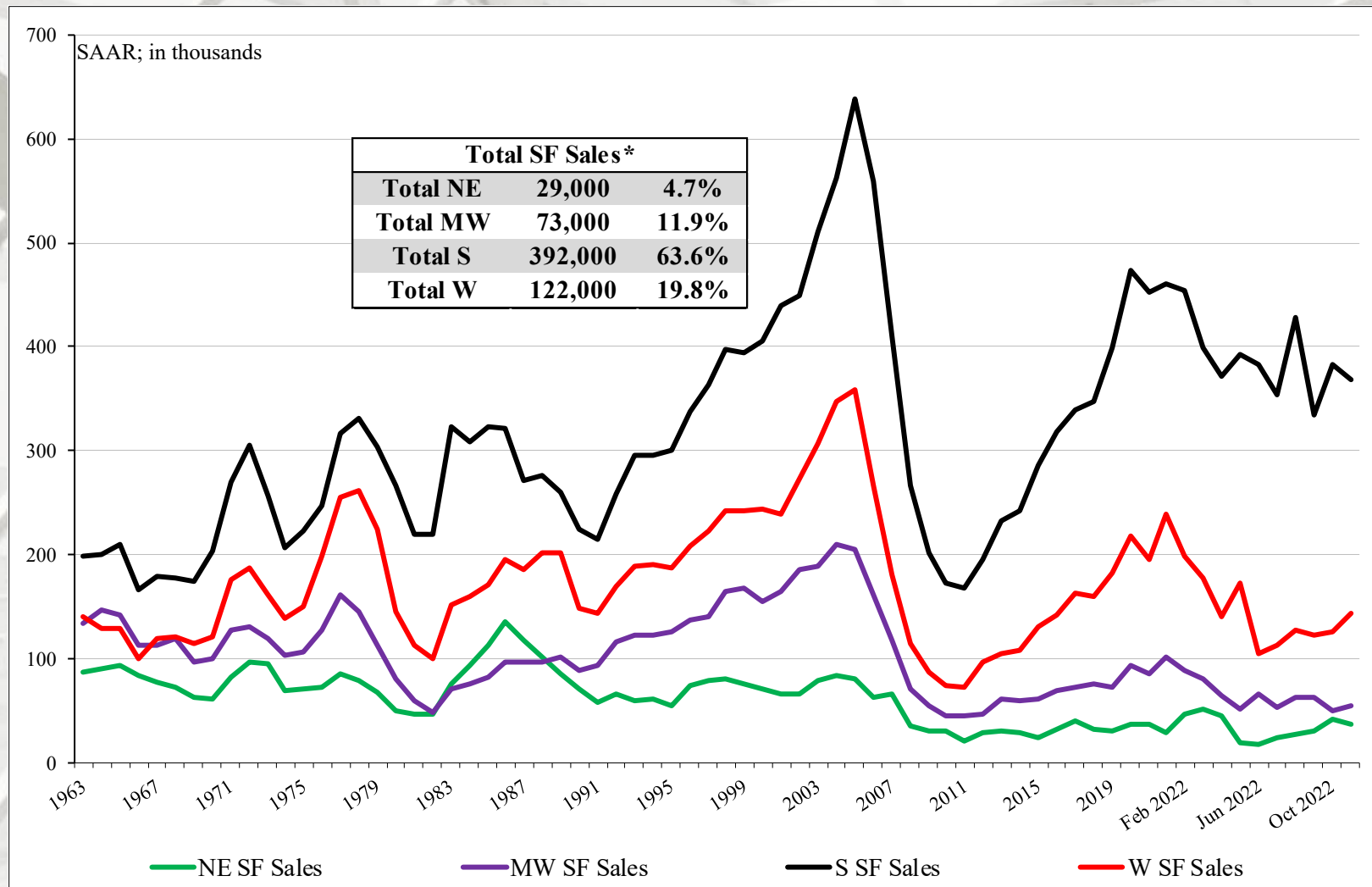
Return TOC

New SF House Sales



* Total new sales by price category and percent.

New SF House Sales by Region

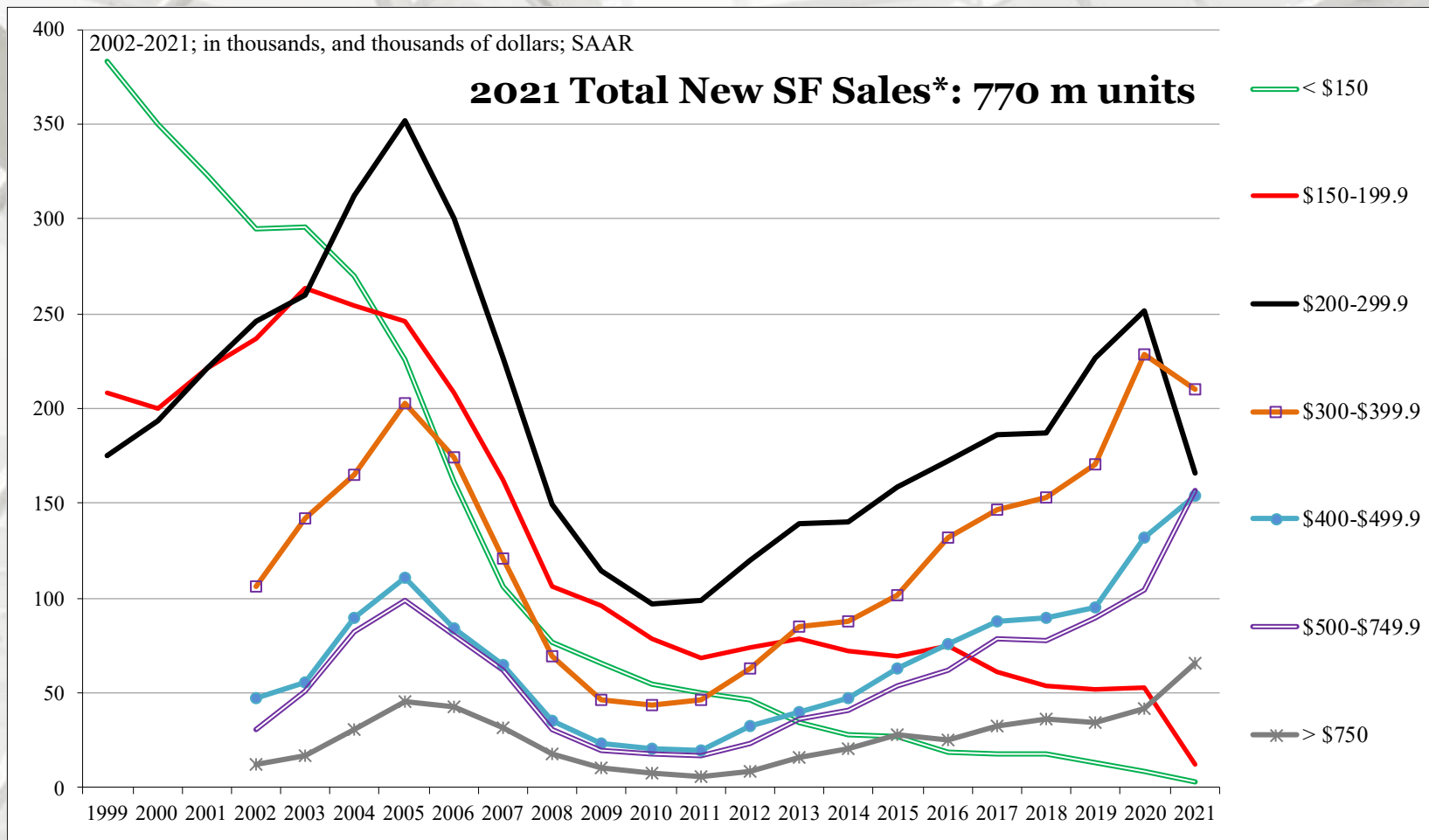


NE = Northeast; MW = Midwest; S = South; W = West

* Percentage of total new sales.

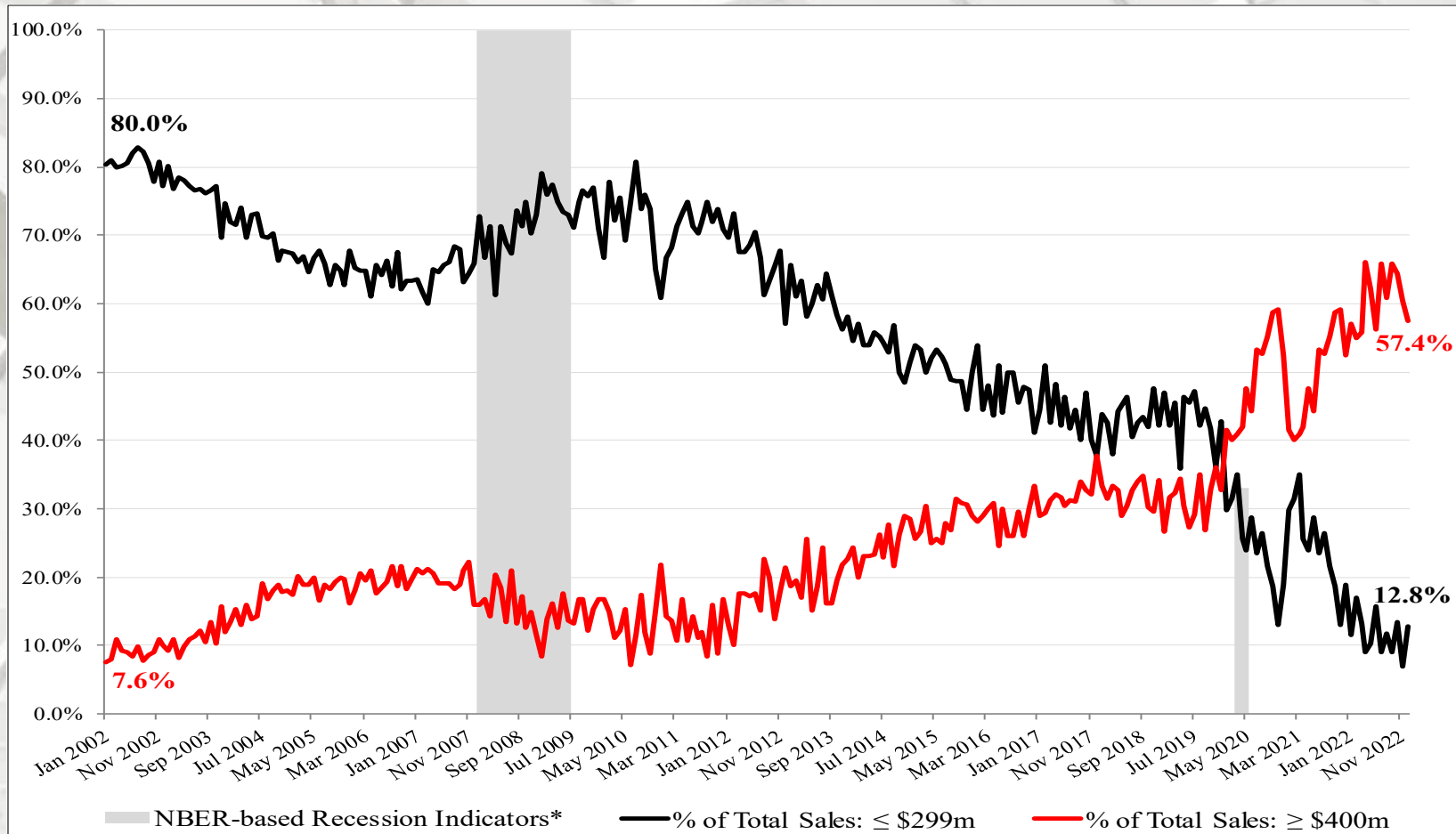
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF House Sales by Price Category



* Sales tallied by price category, nominal dollars.

New SF House Sales

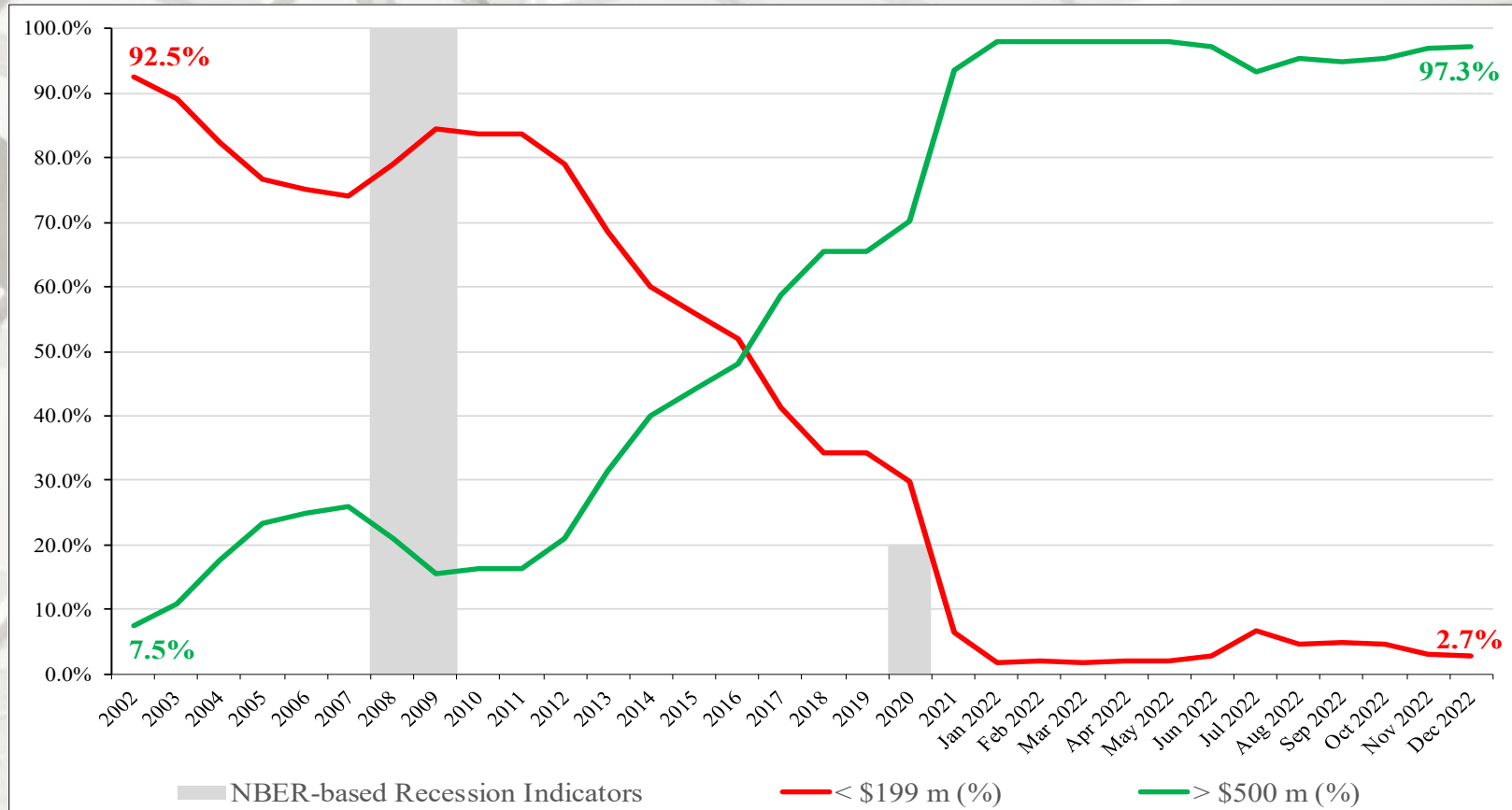


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF Sales: ≤ \$299m and ≥ \$400m: 2002 – December 2022

The sales share of \$400 thousand plus SF houses is presented above^{1,2}. Since the beginning of 2012, the upper priced houses have and are garnering a greater percentage of sales. A decreasing spread indicates that more high-end luxury homes are being sold. Several reasons are offered by industry analysts; 1) builders can realize a profit on higher priced houses; 2) historically low interest rates have indirectly resulted in increasing house prices; and 3) purchasers of upper end houses fared better financially coming out of the Great Recession.

New SF House Sales

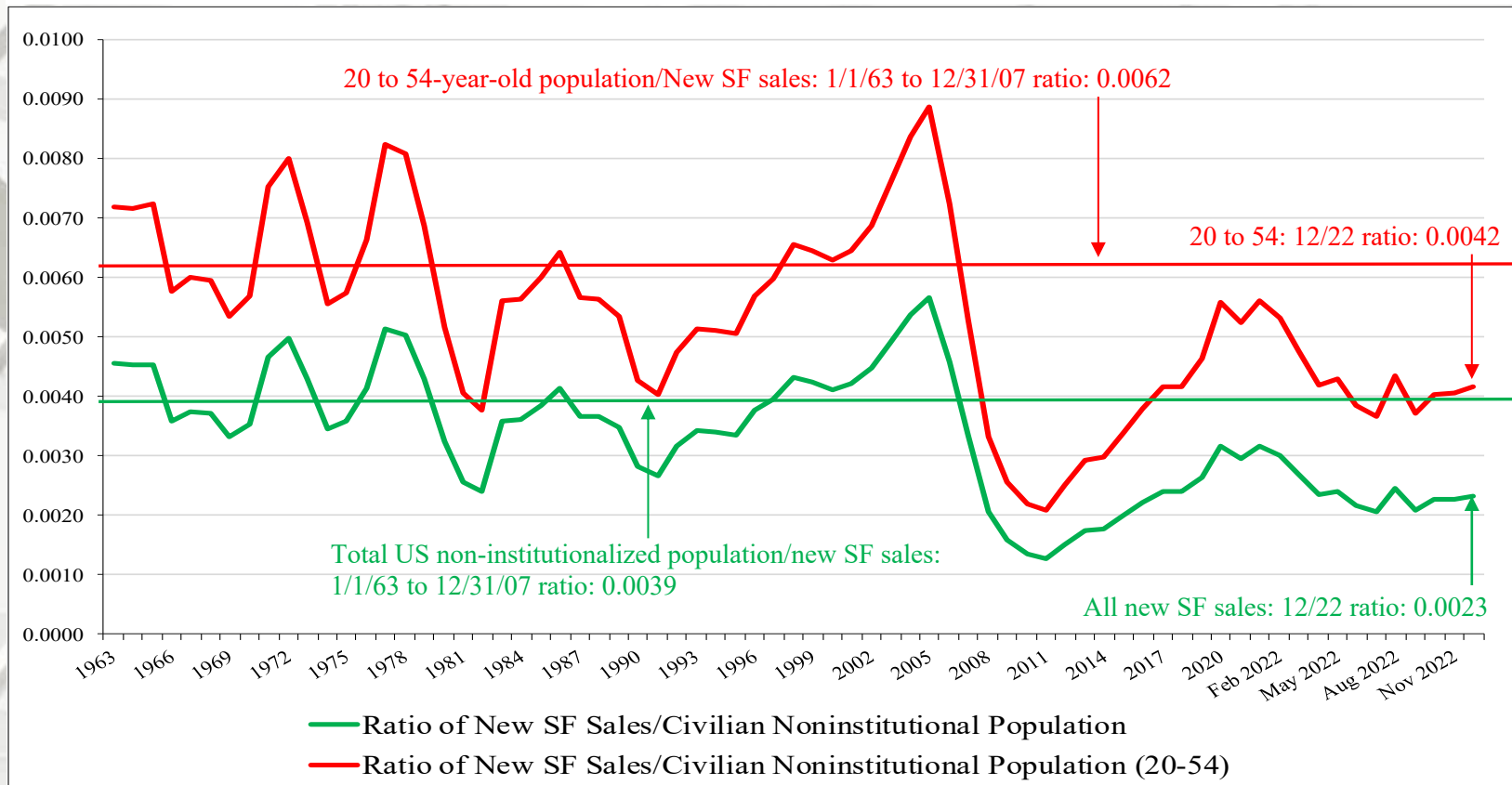


New SF Sales: ≤ \$ 200m and ≥ \$500m: 2002 to December 2022

The number of ≤ \$200 thousand SF houses has declined dramatically since 2002^{1, 2}. Subsequently, from 2012 onward, the ≥ \$500 thousand class has soared (on a percentage basis) in contrast to the ≤ \$200 thousand class. Oft mentioned reasons for this occurrence is builder net margins, affordability, and purchase of new houses for rent – single-family rentals.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF House Sales

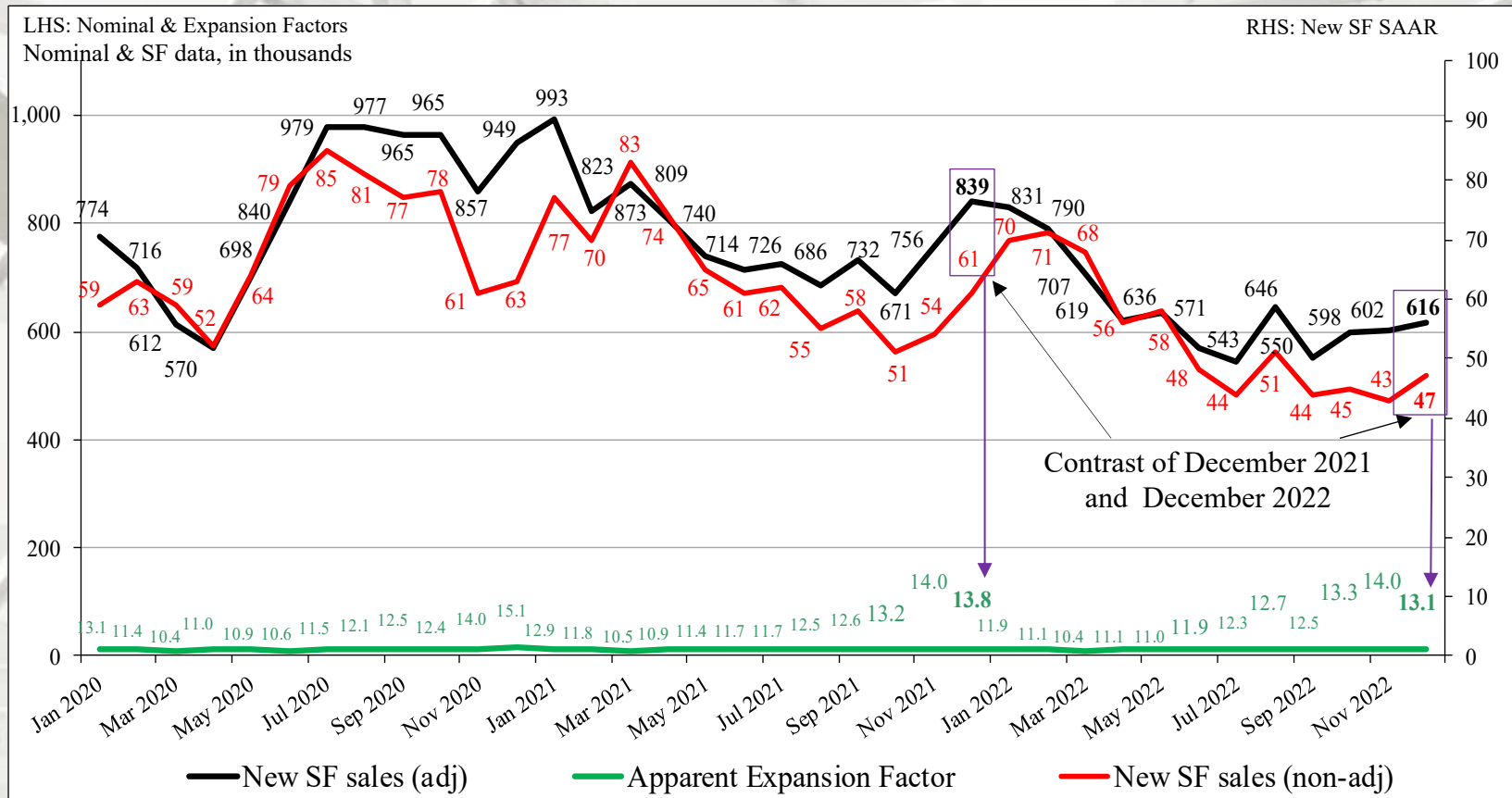


New SF sales adjusted for the US population

From December 1963 to December 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in December 2022 it was 0.0023 – no change from November. The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in December 2022 it was 0.0042 – an improvement from November (0.0041). All are non-adjusted data. From a non-institutionalized population world view, new sales remain less than the long-term average.

On a long-term basis, some studies peg normalized long-term demand at 900,000 to 1,000,000 new SF house sales per year beginning in 2025 through 2050.

Nominal vs. SAAR New SF House Sales



Nominal and Adjusted New SF Monthly Sales

Presented above is nominal (non-adjusted) new SF sales data contrasted against SAAR data.

The apparent expansion factor "...is the ratio of the unadjusted number of houses sold in the US to the seasonally adjusted number of houses sold in the US (i.e., to the sum of the seasonally adjusted values for the four regions)." – U.S. DOC-Construction

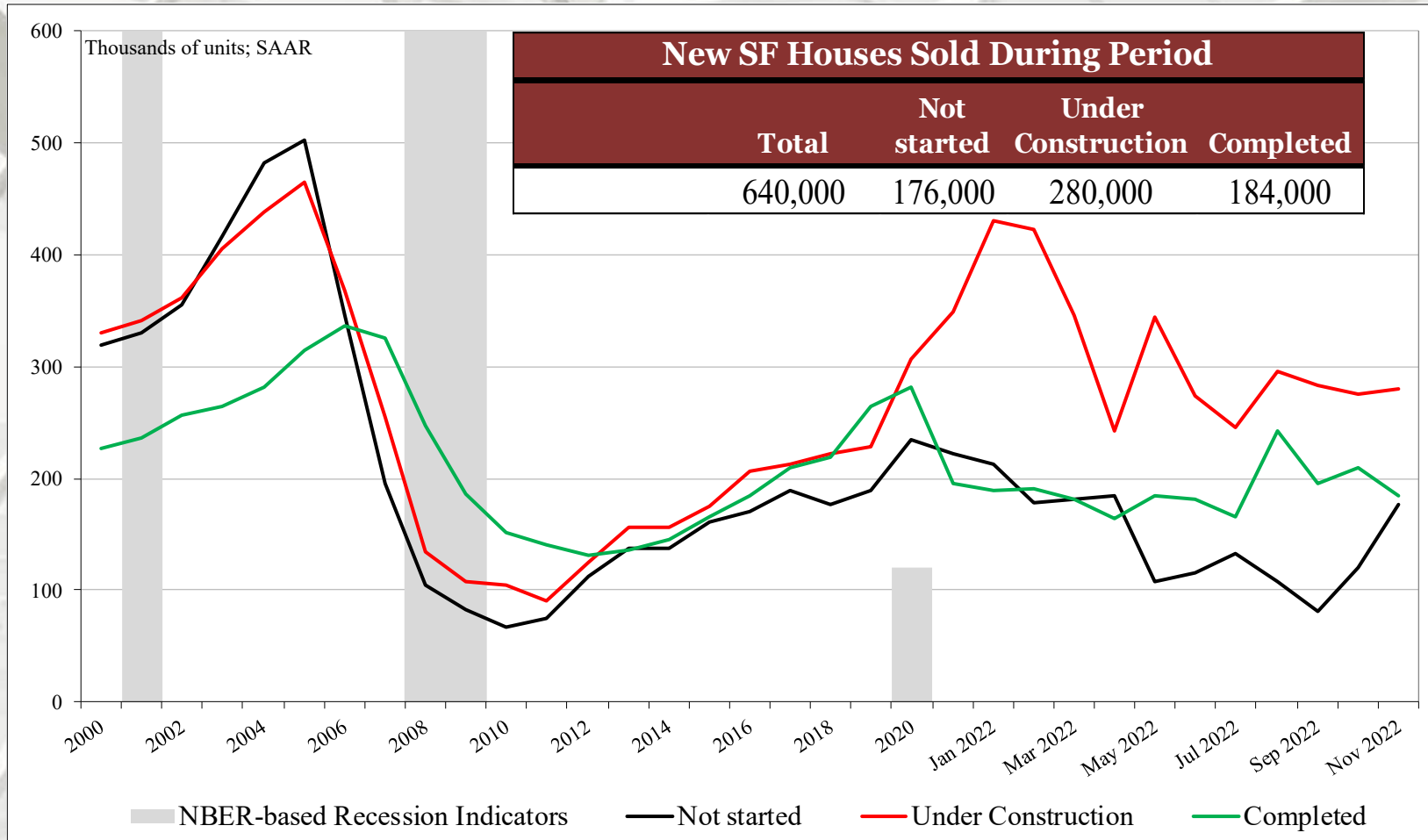
New SF House Sales

New SF Houses Sold During Period

	Total	Not started	Under Construction	Completed
December	616,000	154,000	263,000	199,000
November	602,000	114,000	265,000	223,000
2021	839,000	180,000	436,000	223,000
M/M change	2.3%	35.1%	-0.8%	-10.8%
Y/Y change	-26.6%	-14.4%	-39.7%	-10.8%
Total percentage		25.0%	42.7%	32.3%

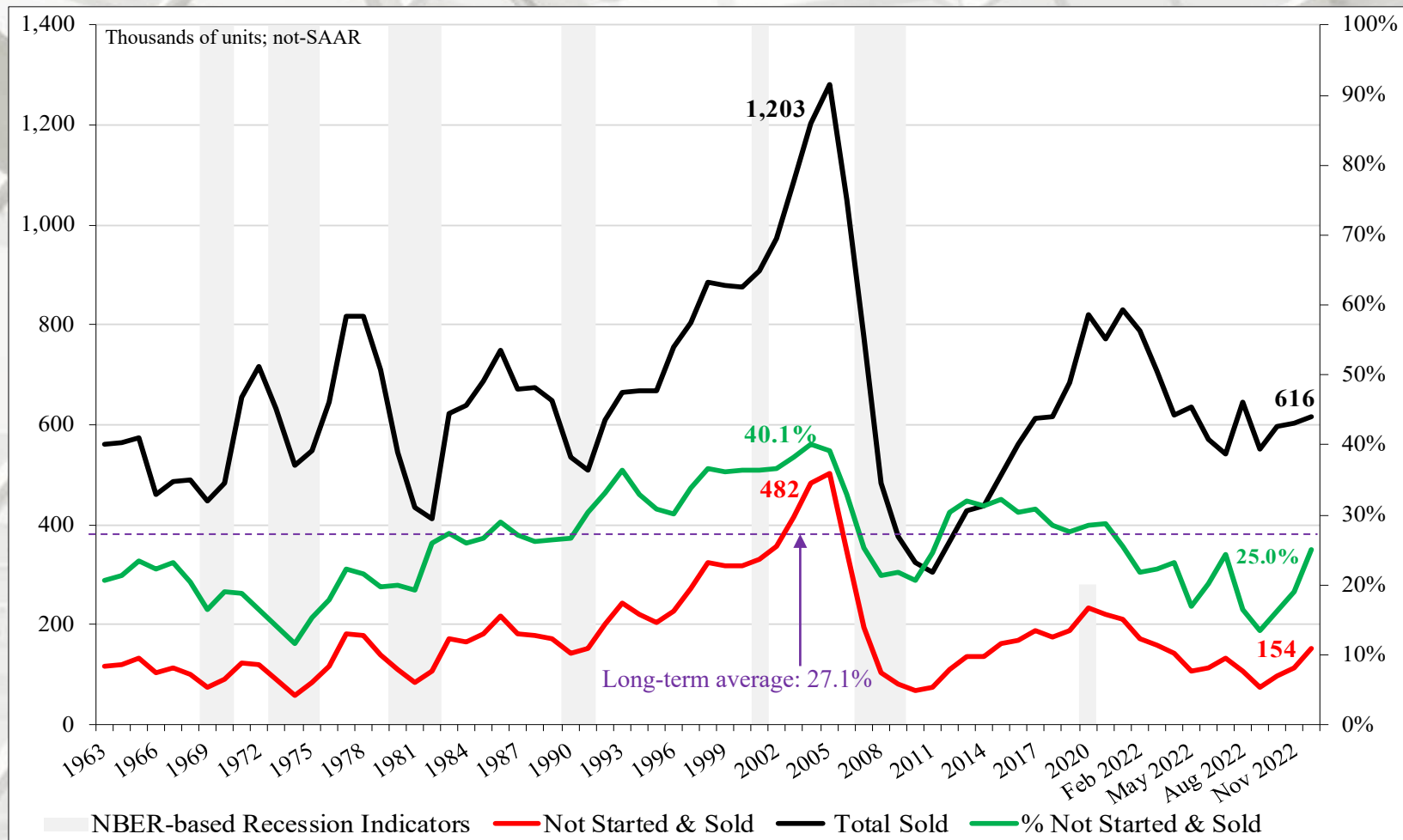
All data is SAAR

New SF House Sales: Sold During Period



* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF House Sales: Percentage Not Started & Sold During Period



Of the new houses sold in December (616 m), 25.0% (154 m) had not been started. The long-term average is 27.1%.

* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF Houses for Sale at End of Period

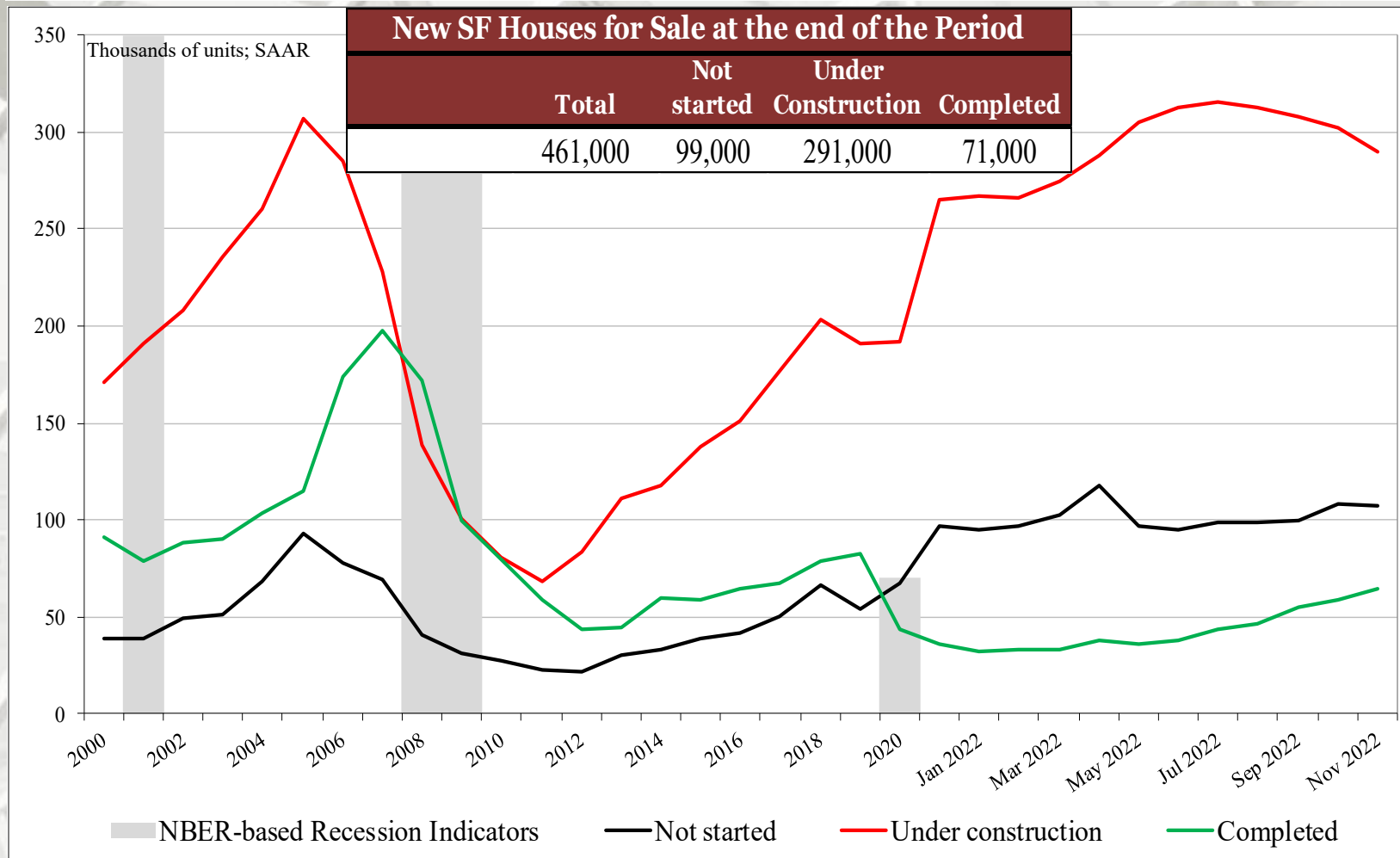
New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
December	461,000	99,000	291,000	71,000
November	461,000	102,000	295,000	64,000
2021	389,000	91,000	265,000	33,000
M/M change	0.0%	-2.9%	-1.4%	10.9%
Y/Y change	18.5%	8.8%	9.8%	115.2%
Total percentage		21.5%	63.1%	15.4%

Not SAAR

Of houses listed for sale (461 m) in December, 13.8% (64 m) have been built. In the 'ground had not been broken for construction' or 'not started' category, 107 m (23.2%) were sold.

New SF House Sales: For Sale at End of Period



NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

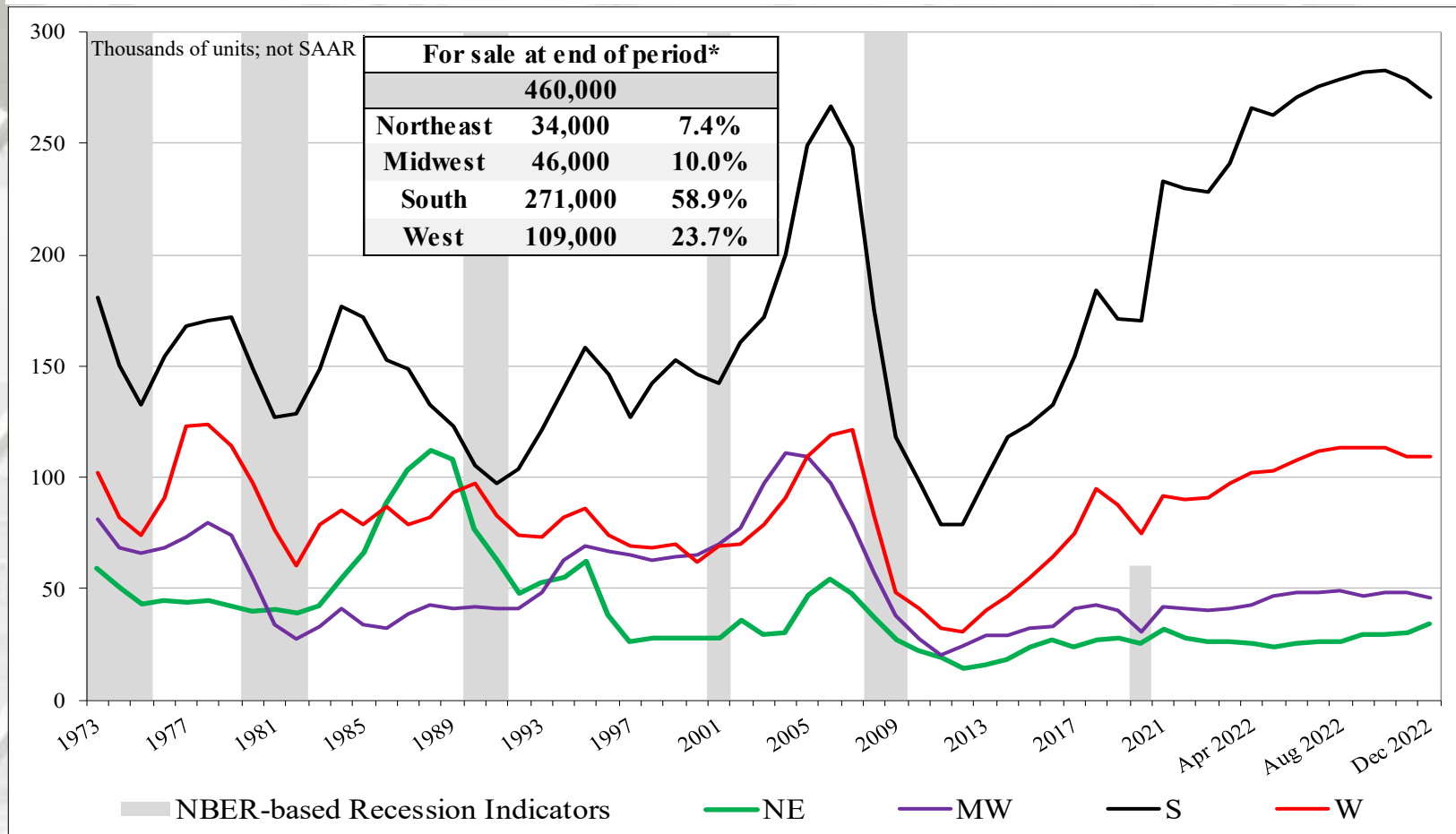
New SF House Sales

New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
December	461,000	99,000	291,000	71,000
November	461,000	102,000	295,000	64,000
2021	389,000	91,000	265,000	33,000
M/M change	0.0%	-2.9%	-1.4%	10.9%
Y/Y change	18.5%	8.8%	9.8%	115.2%
Total percentage		21.5%	63.1%	15.4%

* Not SAAR

New SF Houses for Sale at End of Period by Region

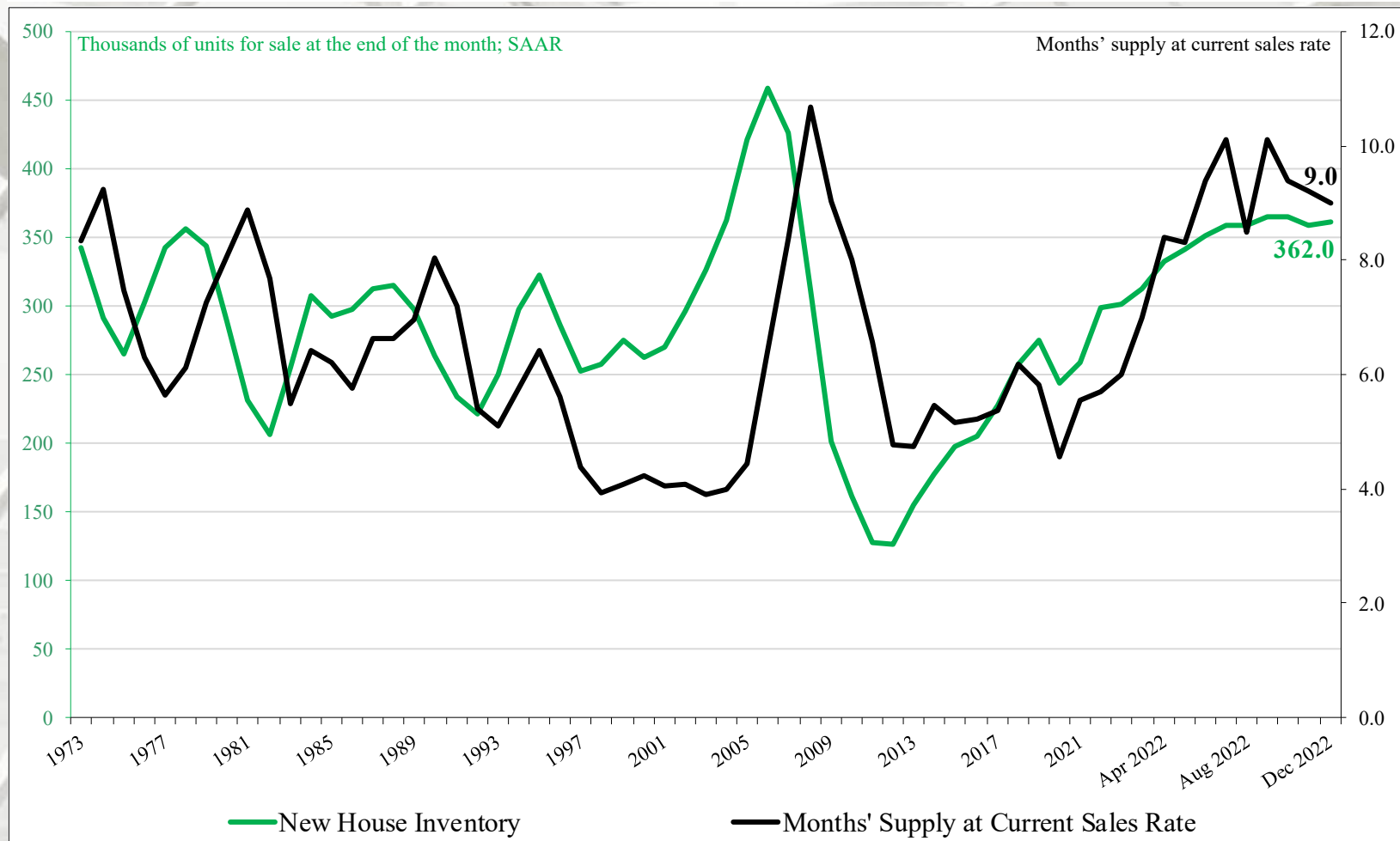


NE = Northeast; MW = Midwest; S = South; W = West

* Percentage of new SF sales.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

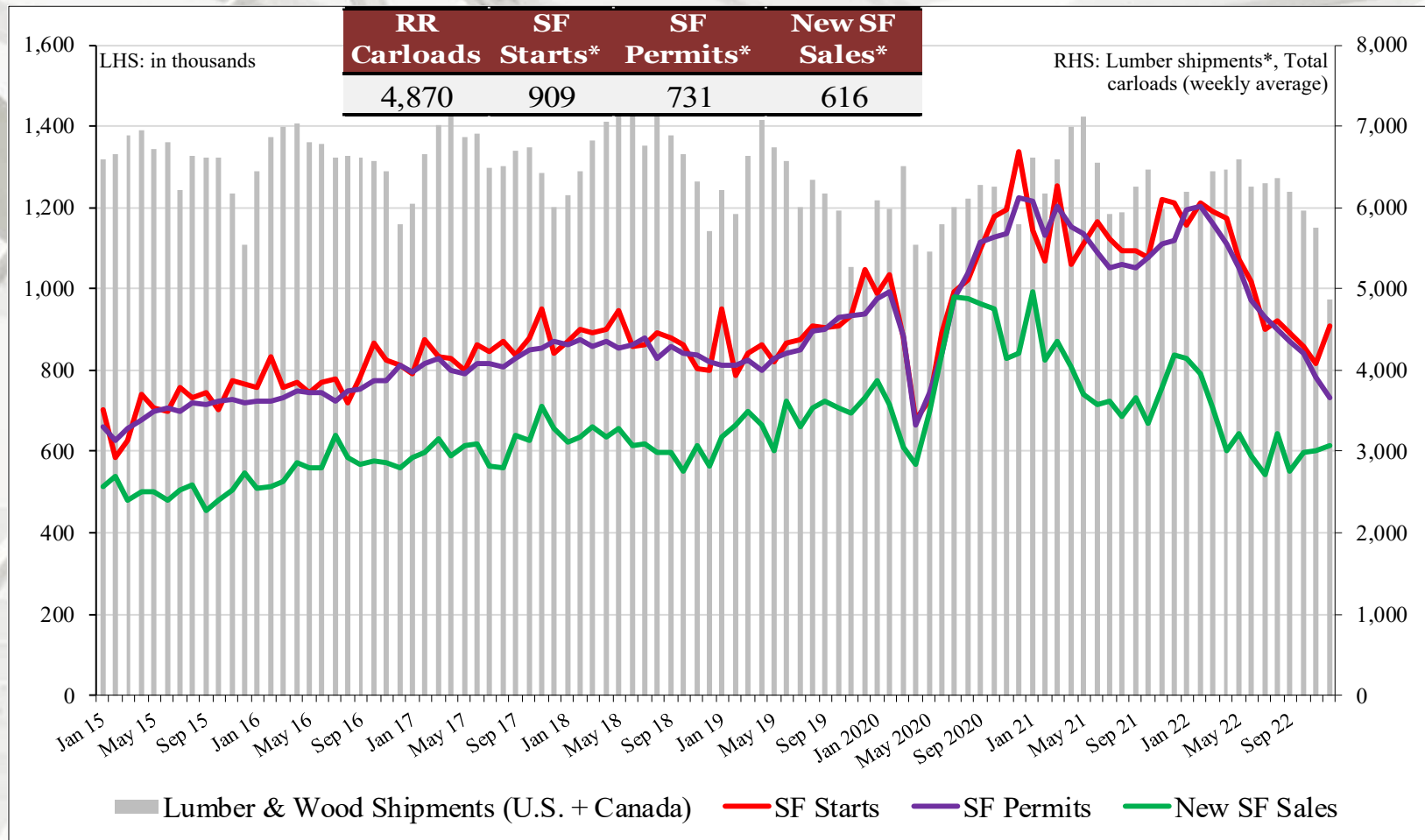
Months' Supply and New House Inventory^a



^a New HUC + New House Completions (sales data only)

The months' supply of new houses for sale was 8.9 at the end of December 2022 (SAAR).

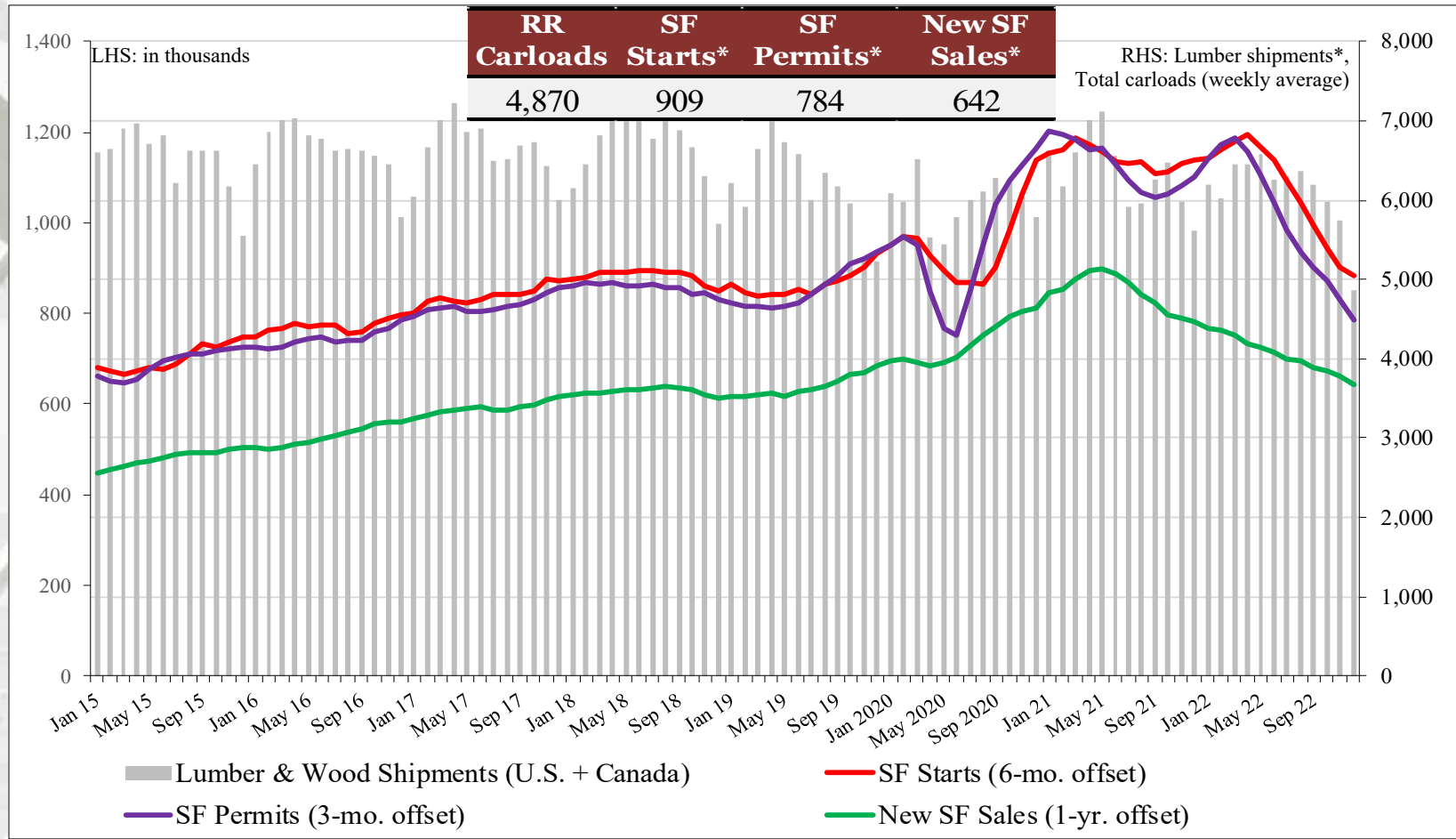
U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



Carloads of Canadian + U.S. lumber and wood shipments to the U.S. are contrasted above to U.S. housing metrics. Annual SF starts, SF Permits, and New sales are compared to total carload lumber and wood shipments. The intent is to discern if lumber shipments relate to future SF starts, SF permits, and new SF sales. It is realized that lumber and wood products are trucked; however, to our knowledge comprehensive and timely trucking data is not available.

* In thousands

U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



Carloads of Canadian + US lumber and wood shipments to the US are contrasted above to U.S. housing metrics. SF starts are off-set 6-months (a typical time-frame from permit issuance to actual start); Permits are off-set 3-months; and New sales are off-set 1-year. The intent is to discern if lumber shipments relate to future SF starts, SF permits, and New sales. It is realized that lumber and wood products are trucked; however, to our knowledge comprehensive and timely trucking data is not available.

* In thousands.

US Housing Construction & Home Purchase Indicators

Mortgage Bankers Association

Chart of the Week

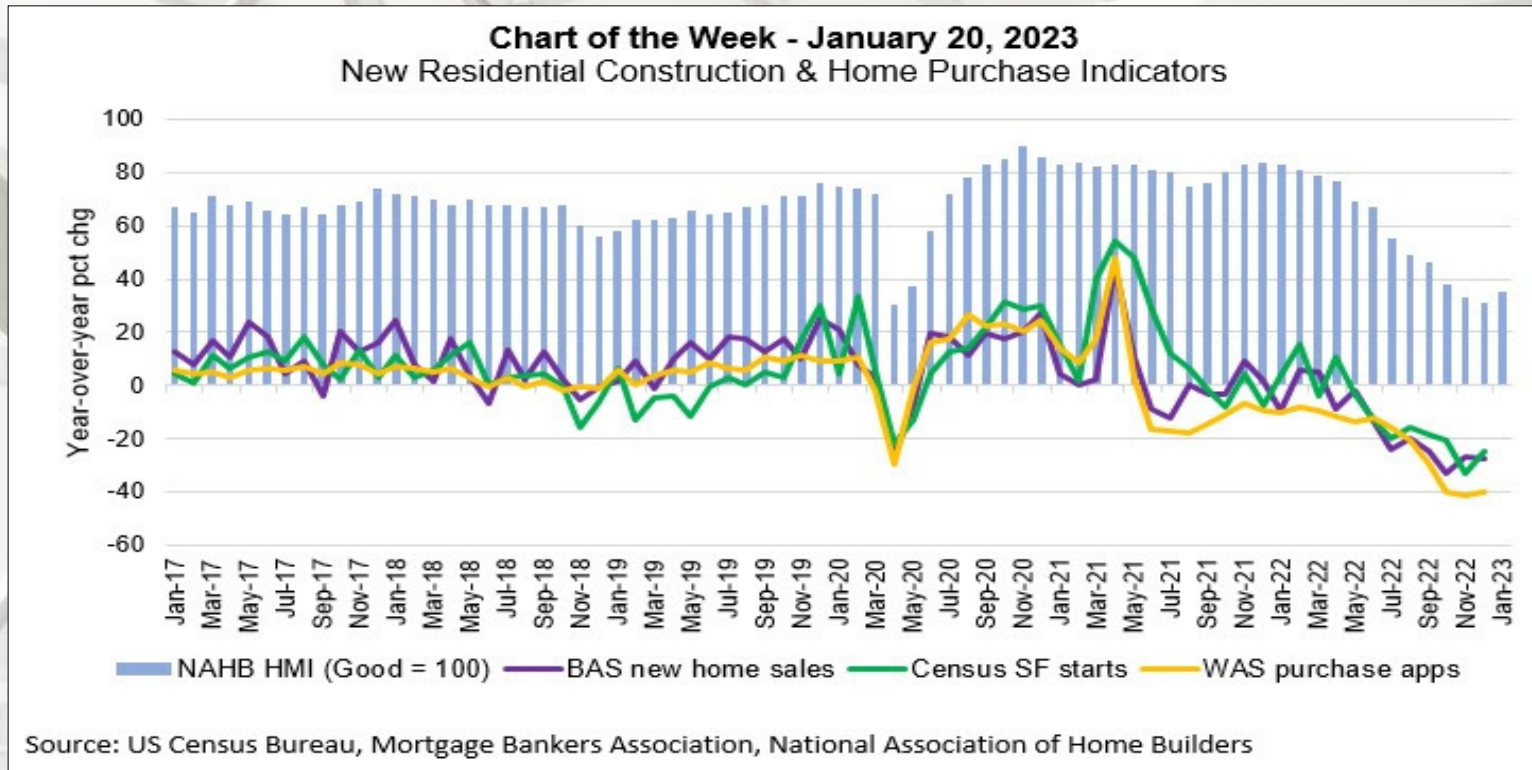
This week's [MBA Chart of the Week](#) captures data on new residential construction market and the state of new single-family home sales. Data on home sales, housing starts, and purchase applications are shown as year-over-year percent changes, while the National Association of Home Builders' (NAHB) [Housing Market Index \(HMI\)](#) is an index level.

December results from [MBA's Builder Applications Survey \(BAS\)](#) showed that new home purchase activity – both for applications and estimated new home sales – ran more than 20 percent behind last year's pace. The decline in purchase activity was consistent with annual declines in single-family housing starts for much of the past year, as shown by the U.S. Census Bureau data for December 2022. Higher mortgage rates contributed to already challenging affordability conditions, and fears of a weakening economy dampened housing demand in 2022, which in turn drove a pull-back in new construction. Single-family housing starts decreased 32 and 36 percent for November and December of 2022 compared to the corresponding months in 2021.

The January NAHB HMI, which measures home builder sentiment, reflected a potential turning point in the outlook for new construction after 12 months of deterioration. Increased buyer traffic as mortgage rates have backed off from recent highs drove some of the improvement. A shortage of entry-level homes will continue to be a challenge, especially as demographic trends point to a market which will be more reliant on first-time homebuyers.

Many existing homeowners have significantly lower mortgage rates than currently available in the market now and are going to be less likely to move and list their homes.” – Mike Fratantoni, Chief Economist and Senior Vice President of Research and Industry Technology and Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

US Housing Construction & Home Purchase Indicators



Mortgage Bankers Association

“[MBA’s Weekly Applications Survey \(WAS\)](#) data on purchase mortgage applications, which includes both new and existing purchases, jumped last week, but are still about 35 percent below last year’s levels.

The coming months will be a challenge for the housing market, but we may have reached the trough. With mortgage rates expected to fall back below six percent this year, we expect both new residential construction and purchases to turn back up later this year.” – Mike Fratantoni, Chief Economist and Senior Vice President of Research and Industry Technology and Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

December 2022 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
December	\$857,150	\$384,437	\$120,315	\$352,398
November	\$859,988	\$393,407	\$116,565	\$350,016
2021	\$842,949	\$450,520	\$99,667	\$292,762
M/M change	-0.3%	-2.3%	3.2%	0.7%
Y/Y change	1.7%	-14.7%	20.7%	20.4%

* millions.

** The US DOC does not report improvement spending directly, this is a monthly estimation: ((Total Private Spending – (SF spending + MF spending)).

All data are SAARs and reported in nominal US\$.

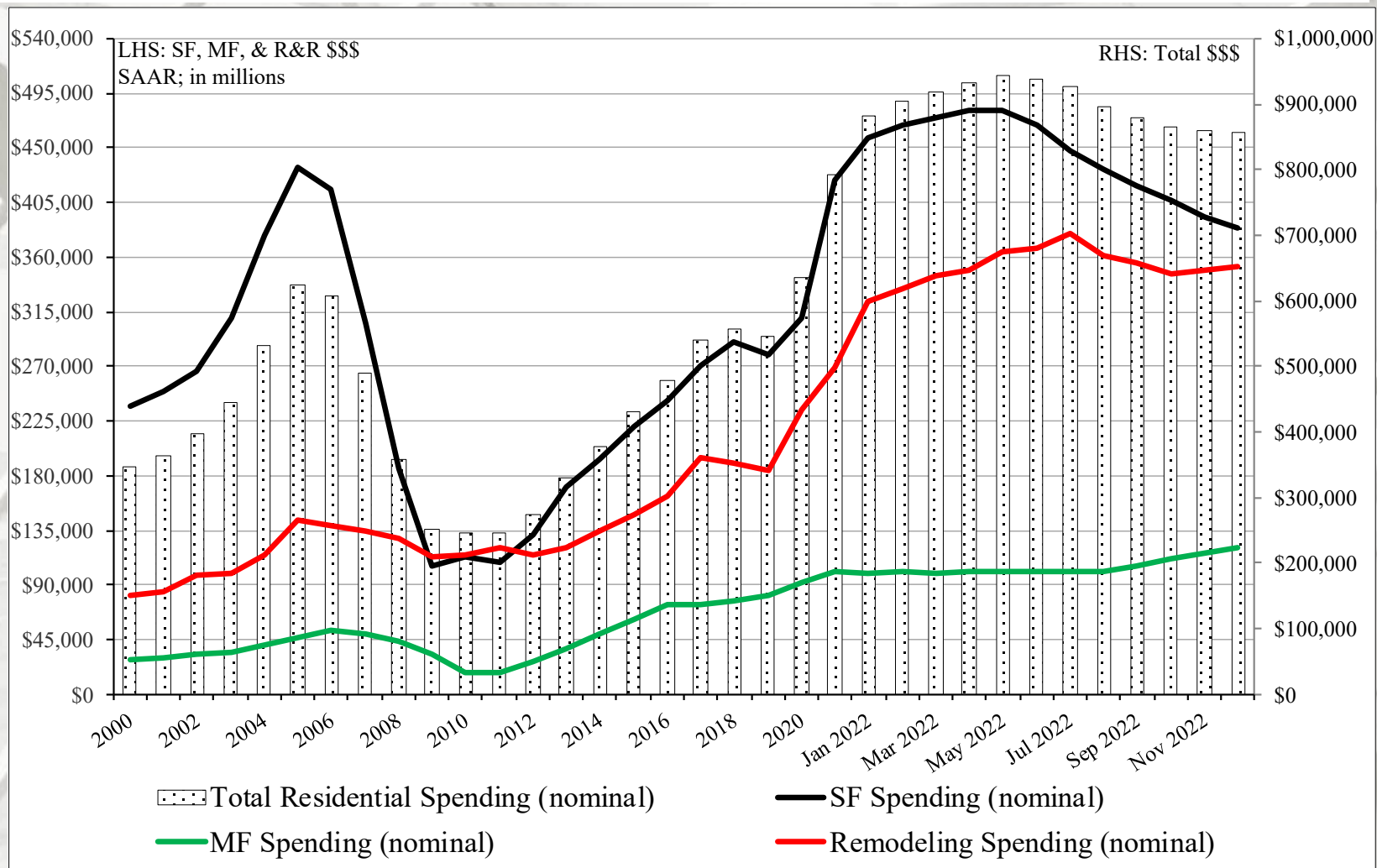
Total private residential construction spending includes new single-family, new multi-family, and improvement (AKA repair and remodeling) expenditures.

New single-family: new houses and town houses built to be sold or rented and units built by the owner or for the owner on contract. The classification excludes residential units in buildings that are primarily nonresidential. It also excludes manufactured housing and houseboats.

New multi-family includes new apartments and condominiums. The classification excludes residential units in buildings that are primarily nonresidential.

Improvements: Includes remodeling, additions, and major replacements to owner occupied properties subsequent to completion of original building. It includes construction of additional housing units in existing residential structures, finishing of basements and attics, modernization of kitchens, bathrooms, etc. Also included are improvements outside of residential structures, such as the addition of swimming pools and garages, and replacement of major equipment items such as water heaters, furnaces and central air-conditioners. Maintenance and repair work is not included.

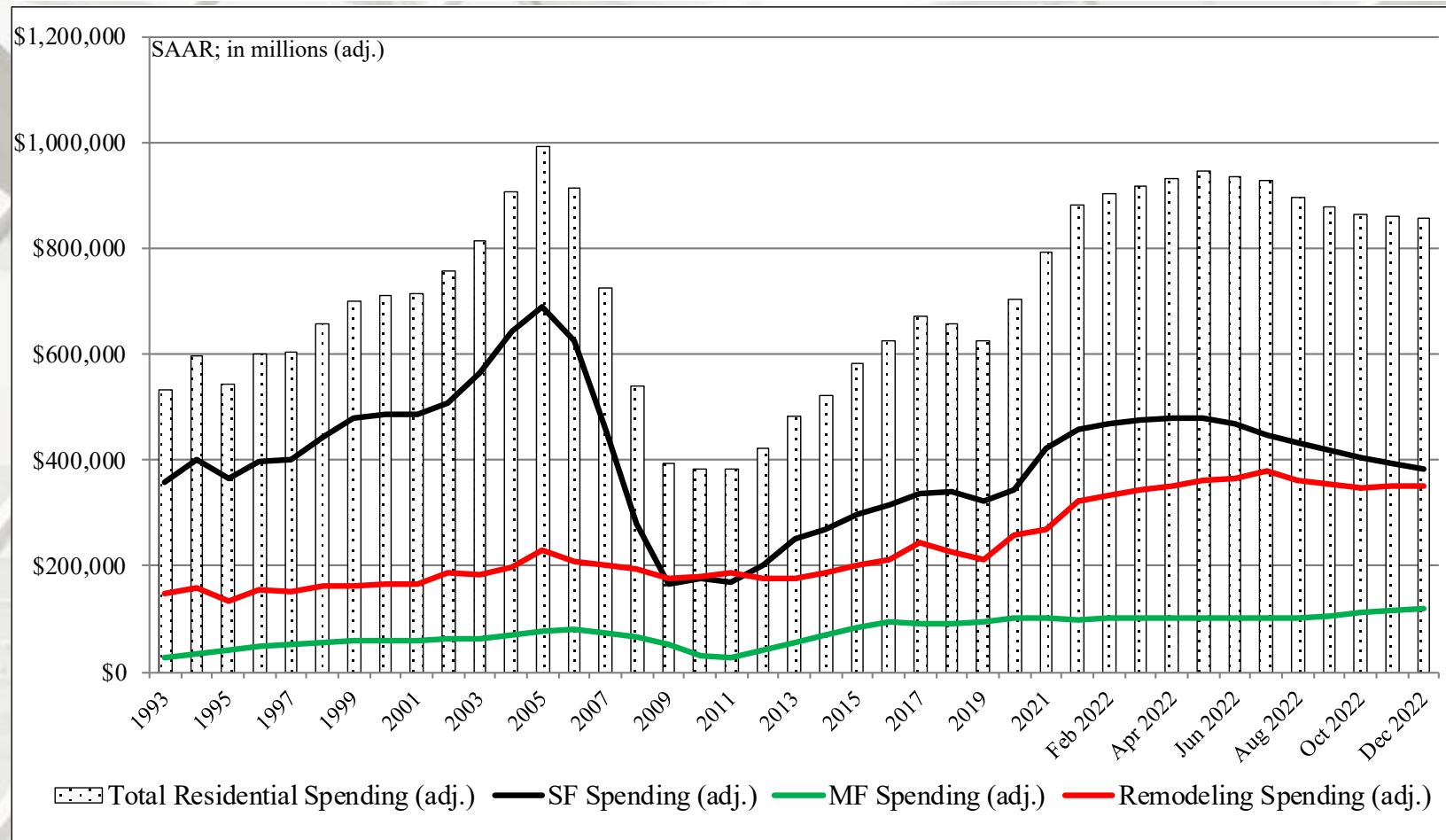
Total Construction Spending (nominal): 2000 – December 2022



Reported in nominal US\$.

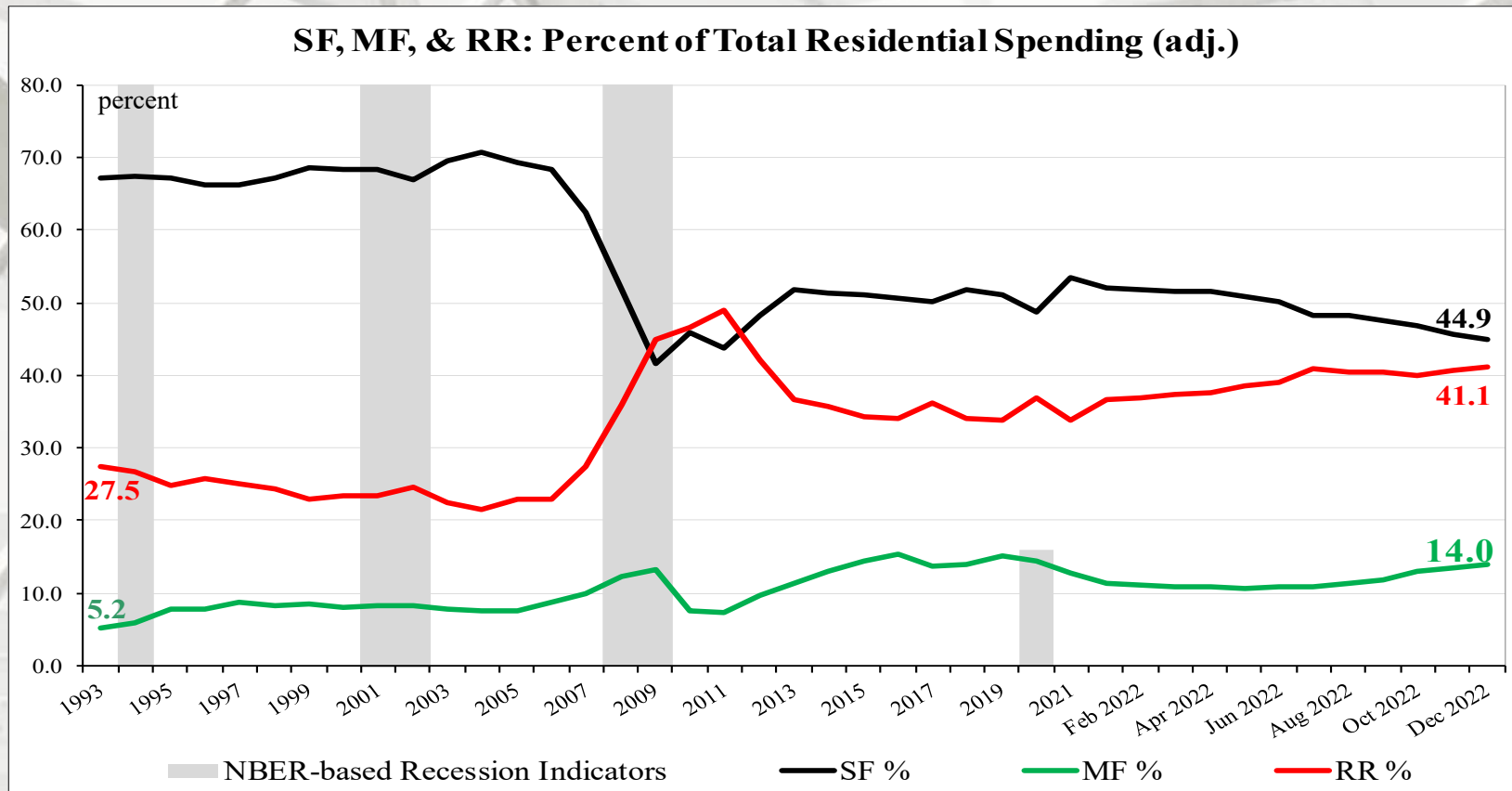
The US DOC does not report improvement spending directly, this is a monthly estimation for 2022.

Total Construction Spending (adjusted): 1993 – December 2022



Reported in adjusted \$US: 1993 – 2021 (adjusted for inflation, BEA Table 1.1.9); January to December 2022 reported in nominal US\$.

Construction Spending Shares: 1993 – December 2022



Total Residential Spending: 1993 through 2006

SF spending average: 69.2%

MF spending average: 7.5%

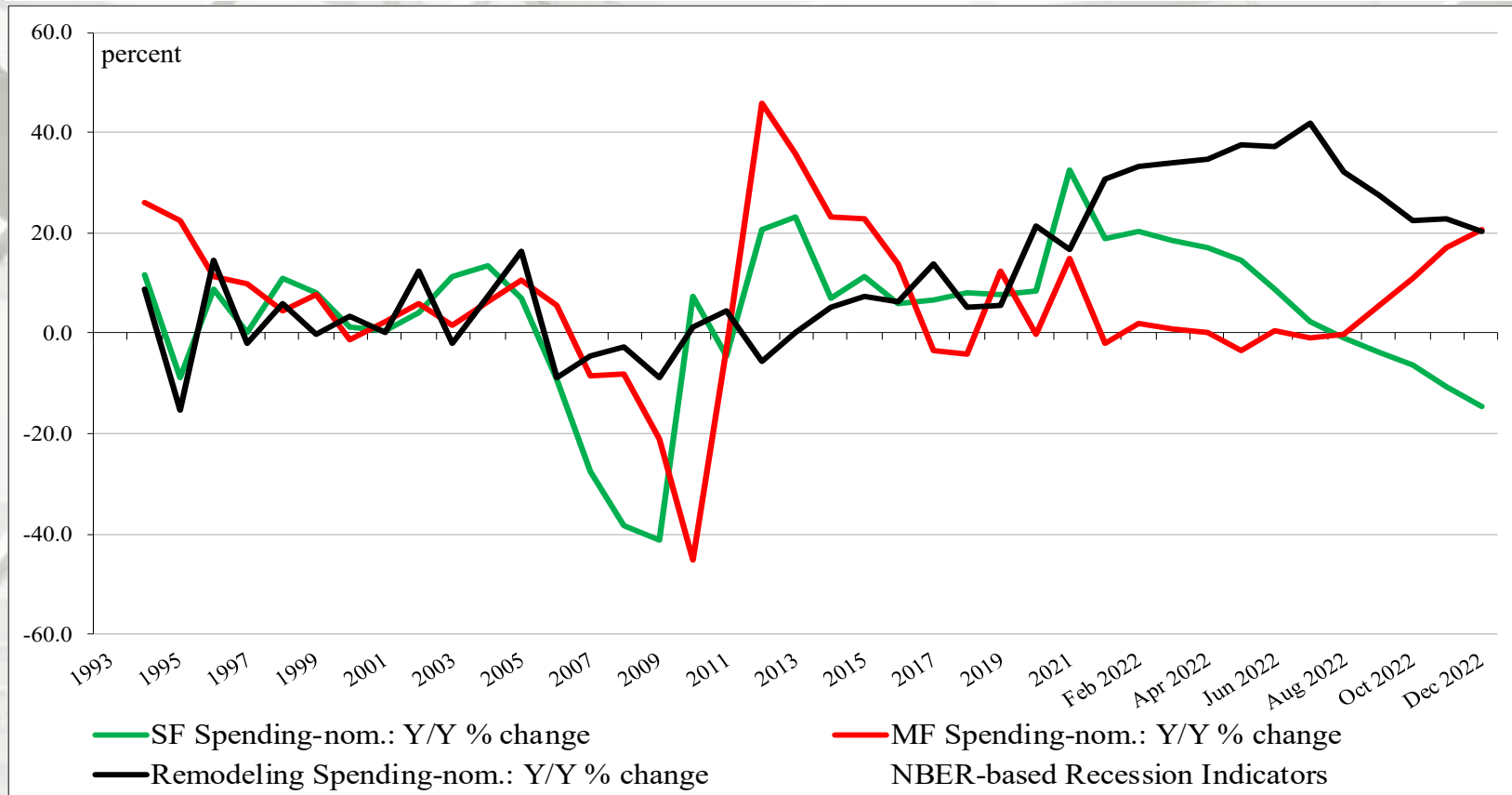
Residential remodeling (RR) spending average: 23.3% (SAAR).

Note: 1993 to 2021 (adjusted for inflation, BEA Table 1.1.9); December 2022 reported in nominal US\$.

* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Sources: * <https://fred.stlouisfed.org/series/USREC>, 7/24/21; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 2/1/23 and <http://www.bea.gov/iTable/iTable.cfm>; 9/30/22

Adjusted Construction Spending: Y/Y Percentage Change, 1993 – December 2022



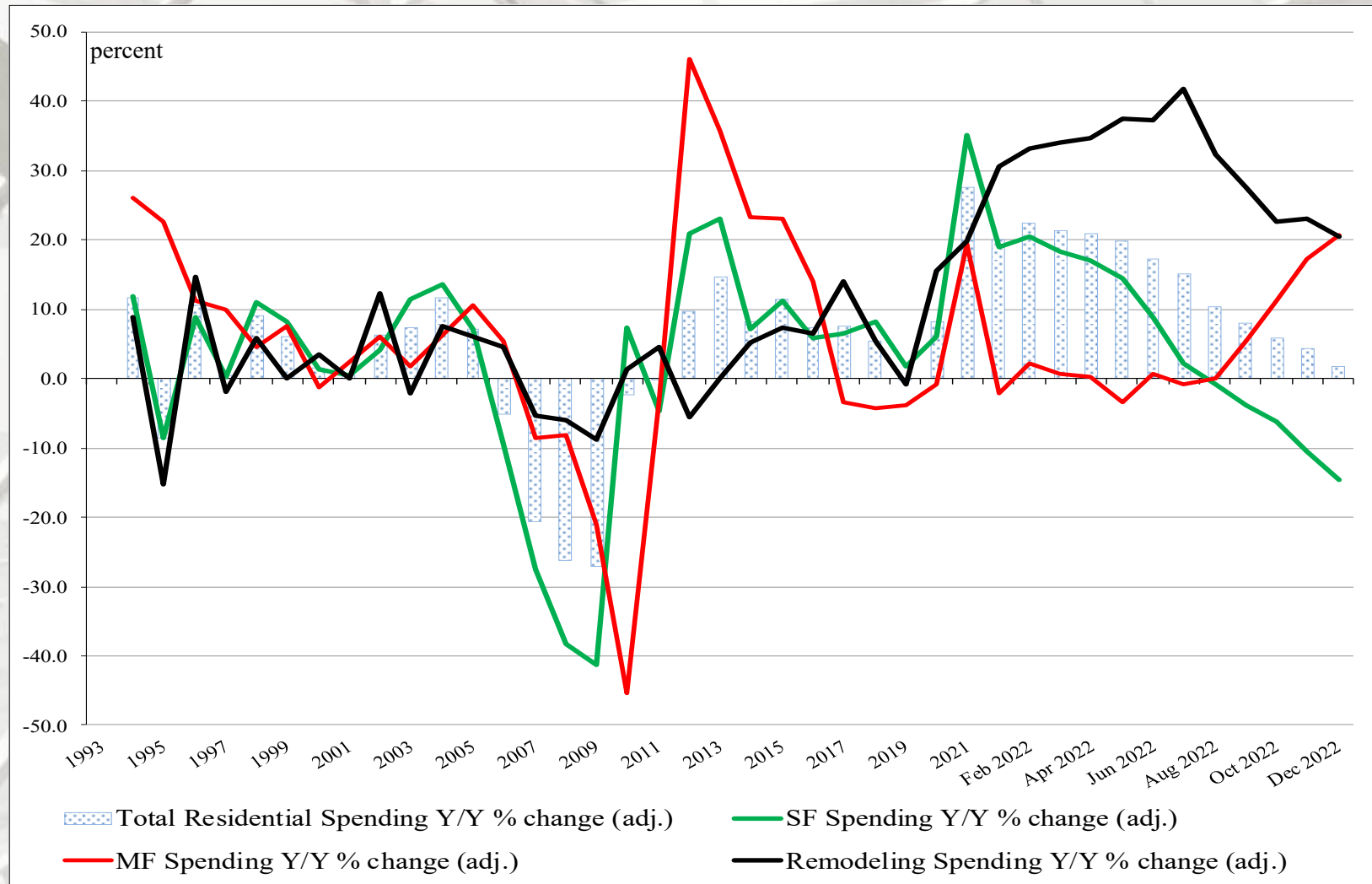
Nominal Residential Construction Spending: Y/Y percentage change, 1993 to December 2021

Presented above is the percentage change of inflation adjusted Y/Y construction spending. MF and RR expenditures were positive on a percentage basis, year-over-year (December 2022 data reported in nominal dollars).

* NBER based Recession Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

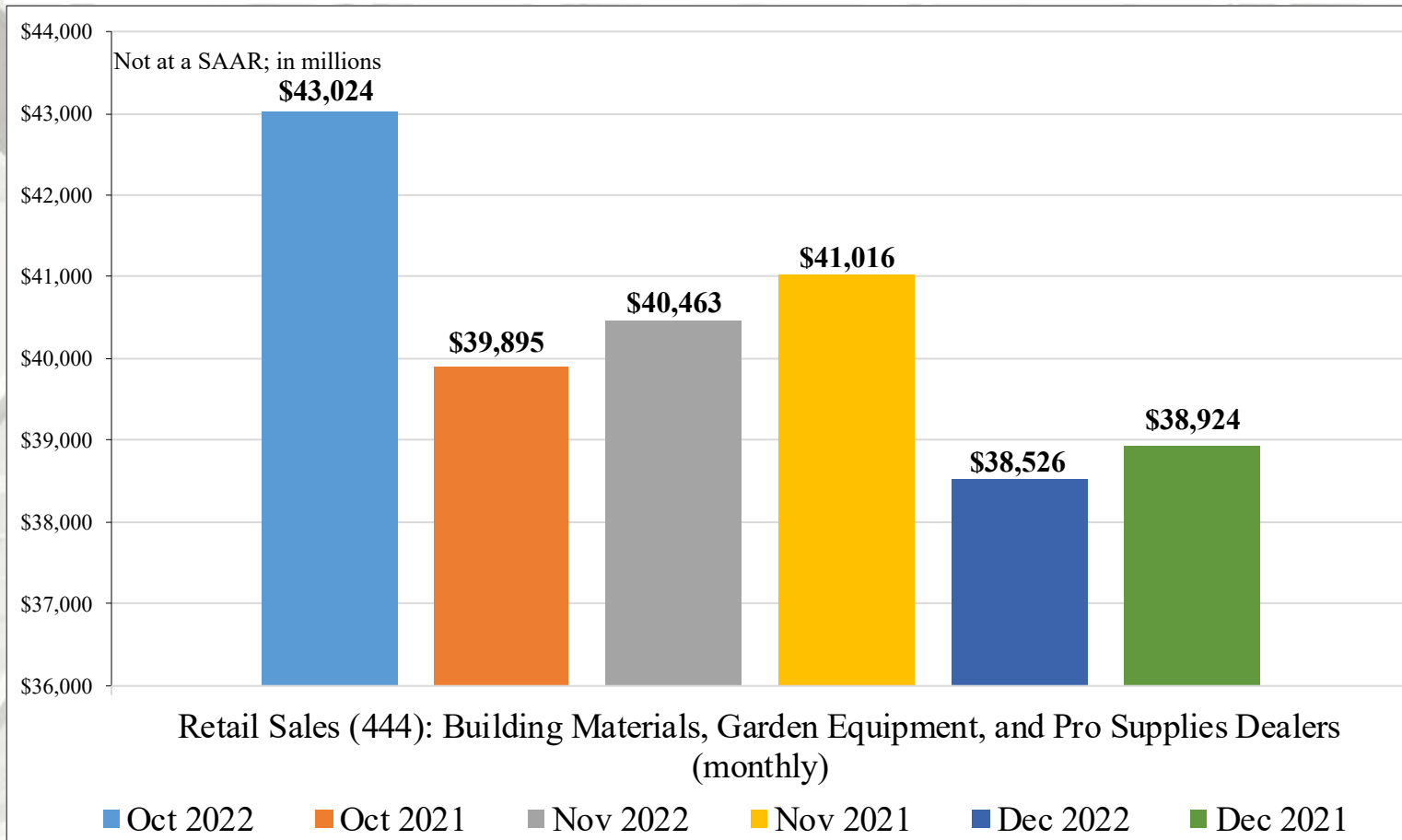
Sources: * <https://fred.stlouisfed.org/series/USREC>, 6/24/21; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 2/1/23 and <http://www.bea.gov/iTable/iTable.cfm>; 9/30/22

Adjusted Construction Spending: Y/Y Percentage Change, 1993 – December 2022



Remodeling

Retail Sales: Building materials, Garden Equipment, & PRO Supply Dealers

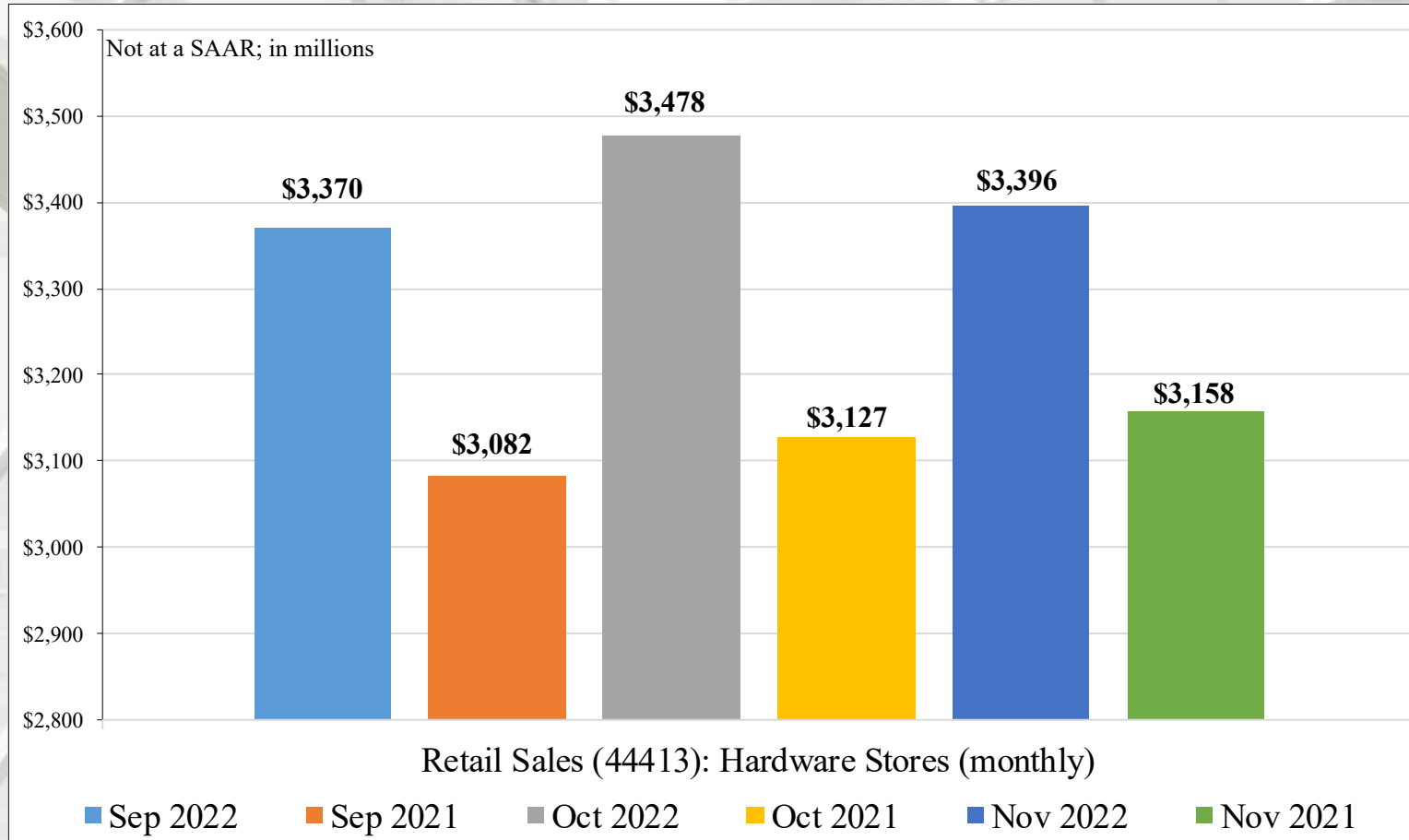


Building materials, Garden Equipment, & PRO Supply Dealers: NAICS 444

NAICS 444 sales decreased 4.8% in December 2022 from December 2022 and increased 0.6% Y/Y (on a non-adjusted basis).

Remodeling

Retail Sales: Hardware Stores



Hardware Stores: NAICS 44413

NAICS 44413 retail sales decreased 2.4% in December 2022 from September 2022 and increased 7.5% in December 2022 from December 2021 (on a non-adjusted basis).

Remodeling

Harvard Joint Center for Housing Studies

Leading Indicator of Remodeling Activity (LIRA)

“After several years of double-digit gains, expenditures for improvements and repairs to the owner-occupied housing stock are expected to grow only modestly in 2023, according to our [Leading Indicator of Remodeling Activity \(LIRA\)](#). The LIRA projects a steep deceleration in annual gains of home renovation and maintenance spending from 16.3 percent at the close of 2022 to just 2.6 percent by year-end 2023.

Slowdowns in existing home sales, house price appreciation, and mortgage refinancing activity coupled with growing concerns for a broader economic recession will cool home remodeling activity this year. Homeowners are likely to pull back on high-end discretionary projects and instead focus their spending on necessary replacements and smaller projects in the immediate future.

Yet, the release of new benchmark data from the American Housing Survey recalibrates the overall market size. The massive pandemic-induced changes in housing and lifestyle decisions fueled remodeling and repair spending in 2020 and 2021, growing 23.8 percent over these two years compared with the 12.5 percent originally estimated. While the pace of expenditures is expected to slow substantially this year, we’ve raised our projection for the remodeling market size in 2023 by about \$45 billion, or 10.2 percent, to \$485 billion.”

Remodeling

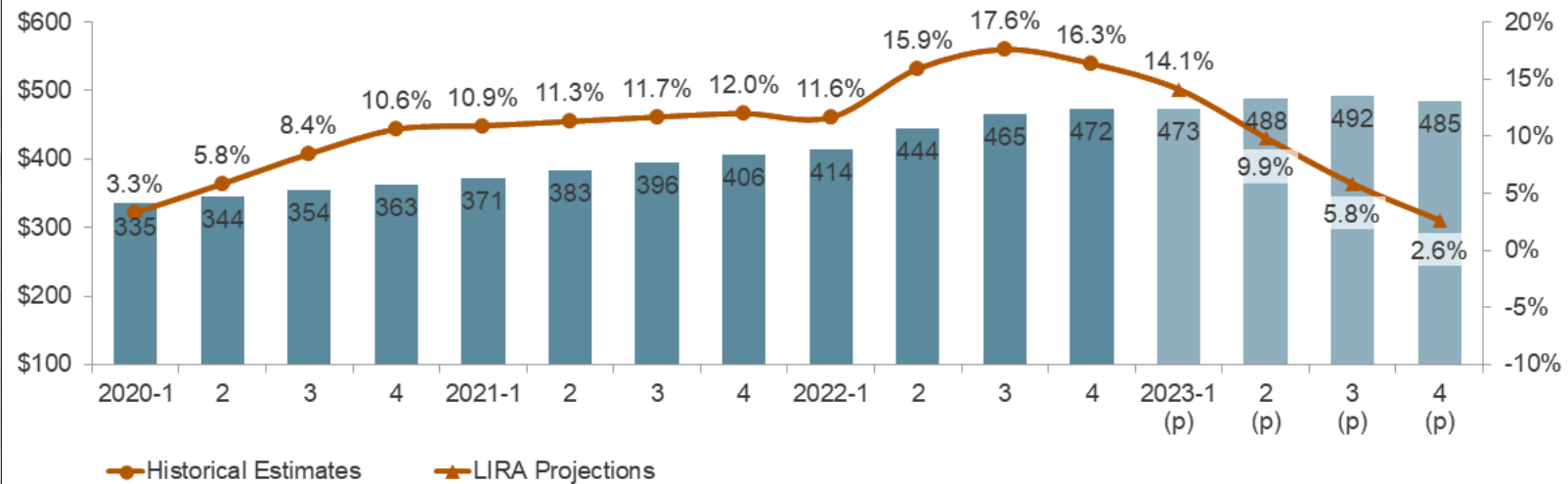
Harvard Joint Center for Housing Studies

Leading Indicator of Remodeling Activity (LIRA)

Leading Indicator of Remodeling Activity – Fourth Quarter 2022


Homeowner Improvements & Repairs
Four-Quarter Moving Totals
Billions

Four-Quarter Moving
Rate of Change



Notes: Improvements include remodels, replacements, additions, and structural alterations that increase the value of homes. Routine maintenance and repairs preserve the current quality of homes. Historical estimates since 2021 are produced using the LIRA model until American Housing Survey benchmark data become available.

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Joint Center for Housing Studies of Harvard University 

Existing House Sales

National Association of Realtors®

	Existing Sales	Median Price	Month's Supply
December	4,020,000	\$366,900	2.9
November	4,080,000	\$372,600	3.3
2021	6,090,000	\$358,800	1.7
M/M change	-1.5%	-1.5%	-12.1%
Y/Y change	-34.0%	2.3%	70.6%

All sales data: SAAR

Existing House Sales

	NE	MW	S	W
December	520,000	1,010,000	1,800,000	690,000
November	530,000	1,020,000	1,840,000	690,000
2021	730,000	1,450,000	2,690,000	1,220,000
M/M change	-1.9%	-1.0%	-2.2%	0.0%
Y/Y change	-28.8%	-30.3%	-33.1%	-43.4%

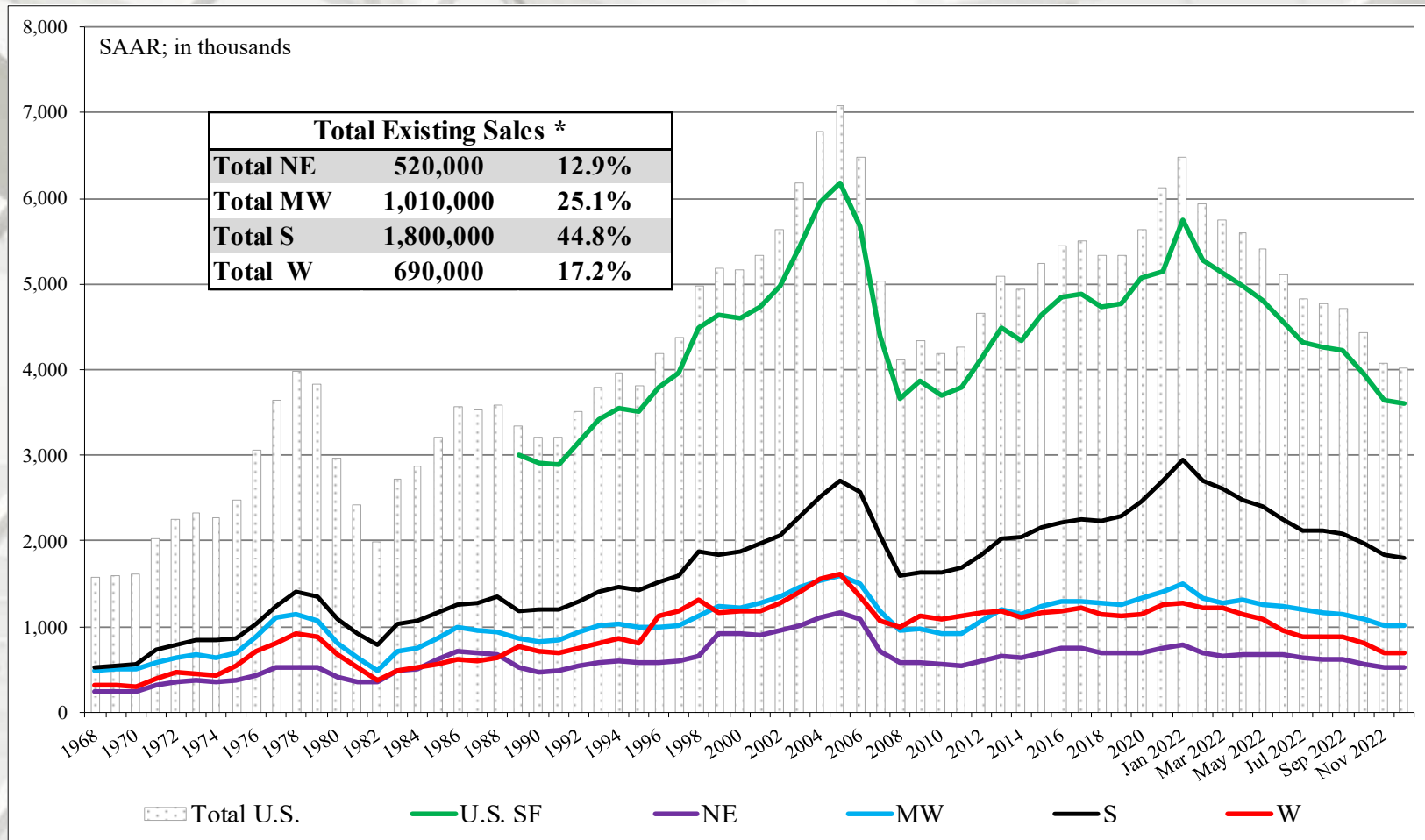
	Existing SF Sales	SF Median Price
December	3,600,000	\$372,700
November	3,640,000	\$378,700
2021	5,410,000	\$365,300
M/M change	-1.1%	-1.5%
Y/Y change	-33.5%	2.0%

All sales data: SAAR.

Source: <https://fred.stlouisfed.org/series/EXHOSLUSM495S>; 1/20/23

Return TOC

Existing House Sales



NE = Northeast; MW = Midwest; S = South; W = West

* Percentage of total existing sales.

U.S. Housing Prices

Federal Housing Finance Agency

U.S. House Price Index

FHFA House Price Index Down 0.1 Percent in November; Up 8.2 Percent from Last Year

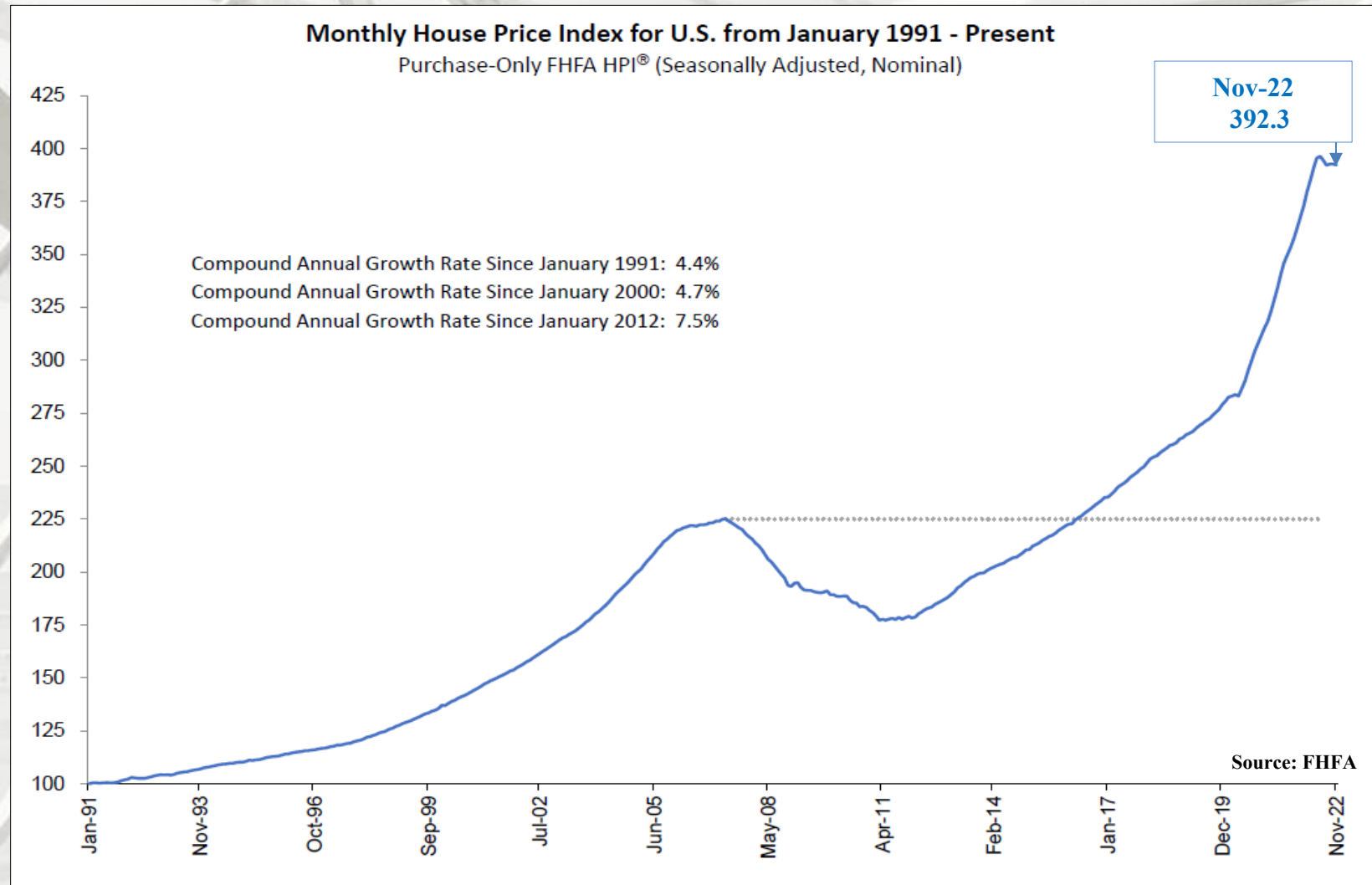
Significant Findings

“House prices fell **0.1 percent** nationwide in November compared to October, according to the latest Federal Housing Finance Agency (FHFA) House Price Index (HPI®). House prices rose **8.2 percent** from November 2021 to November 2022. The previously reported **0.0 percent** price decline in October 2022 remained unchanged.

For the nine census divisions, seasonally adjusted monthly house price changes from October to November 2022 ranged from **-1.1 percent** in the Pacific division to **+0.5 percent** in the West North Central division. The 12-month changes were all positive, ranging from **+2.4 percent** in the Pacific division to **+12.0 percent** in the South Atlantic division.” – Raffi Williams and Adam Russell, FHFA

“U.S. house prices were largely unchanged in the last four months and remained near the peak levels reached over the summer of 2022. While higher mortgage rates have suppressed demand, low inventories of homes for sale have helped maintain relatively flat house prices.” – Nataliya Polkovnichenko, Ph.D., Supervisory Economist, Division of Research and Statistics, FHFA

U.S. Housing Prices



U.S. Housing Prices

S&P CoreLogic Case-Shiller Index Continued To Decline In November

“... Data for November 2022 show that home prices declined across the U.S. More than 27 years of history are available for these data series, and can be accessed in full by going to www.spdji.com.

Year-Over-Year

The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index, covering all nine U.S. census divisions, reported a 9.2% annual gain in November, down from 10.7% in the previous month. The 10-City Composite annual increase came in at 8.0%, down from 9.6% in the previous month. The 20-City Composite posted a 8.6% year-over-year gain, down from 10.4% in the previous month.

Miami, Tampa, and Atlanta reported the highest year-over-year gains among the 20 cities in November. Miami led the way with a 18.4% year-over-year price increase, followed by Tampa in second with a 16.9% increase, and Atlanta in third with a 12.7% increase. All 20 cities reported lower price increases in the year ending November 2022 versus the year ending October 2022. ...

Month-Over-Month

Before seasonal adjustment, the U.S. National Index posted a -0.6% month-over-month decrease in November, while the 10-City and 20-City Composites posted decreases of -0.7% and -0.8%, respectively. After seasonal adjustment, the U.S. National Index posted a month-over-month decrease of -0.3%, and the 10-City and 20-City Composites both posted decreases of -0.5%.

In November, all 20 cities reported declines before seasonal adjustments. After seasonal adjustments, 19 cities reported declines, with only Detroit increasing 0.1%.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

U.S. Housing Prices

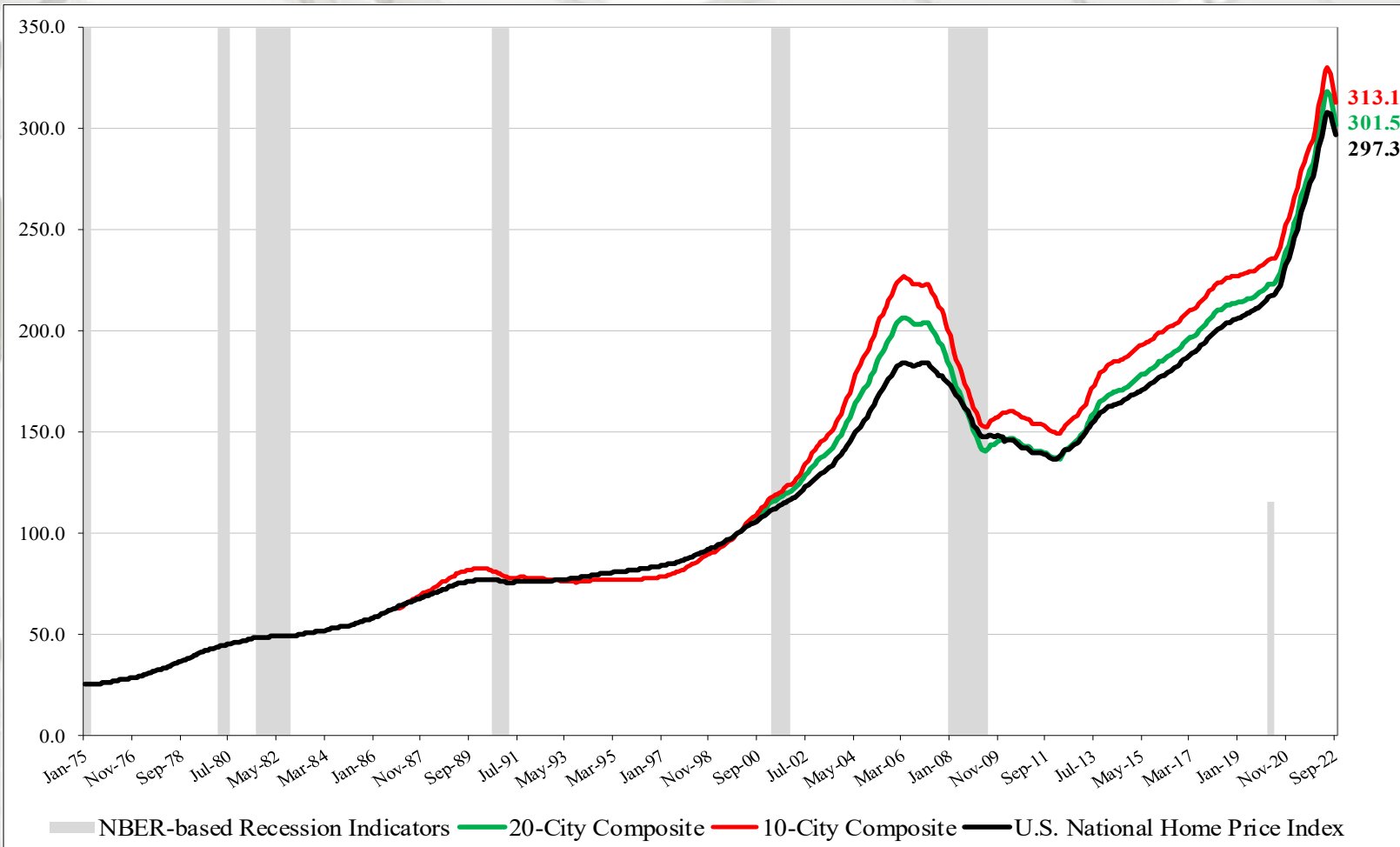
S&P CoreLogic Case-Shiller Index Analysis

“November 2022 marked the fifth consecutive month of declining home prices in the U.S. For example, the National Composite Index fell -0.6% for the month, reflecting a -3.6% decline since the market peaked in June 2022. We saw comparable patterns in our 10- and 20-City Composites, both of which stand more than -5.0% below their June peaks. These declines, of course, came after very strong price increases in late 2021 and the first half of 2022. Despite its recent weakness, on a year-over-year basis the National Composite gained 7.7%, which is in the 74th percentile of historical performance levels.

All 20 cities in our November report showed price declines on a month-over-month basis, with a median decline of -0.8%. Moreover, for all 20 cities, year-over-year gains in November were lower than those of October, with a median year-over-year increase of 6.4%. Interestingly, home prices in San Francisco were down by -1.6% year-over-year, the first negative result for any city since San Francisco’s -0.4% decline in October 2019. This is the worst year-over-year result for San Francisco in more than 10 years (since a -3.0% result in March 2012). West coast weakness was not limited to California, as San Francisco was followed by Seattle (+1.5%) and Portland (+3.9%) at the bottom of the league table.

In contrast, November’s best-performing cities were clustered in the Southeast. Miami (+18.4%) was the best performer, followed by Tampa (+16.9%). November is the eighth consecutive month that one of our Florida cities has been the national leader. The month’s bronze medal went to Atlanta (+12.7%), narrowly edging out Charlotte (+12.6%). Unsurprisingly, the Southeast (+15.1%) and South (+14.3%) were the strongest regions and the West (+4.0%) was the weakest.”
– Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

S&P/Case-Shiller Home Price Indices

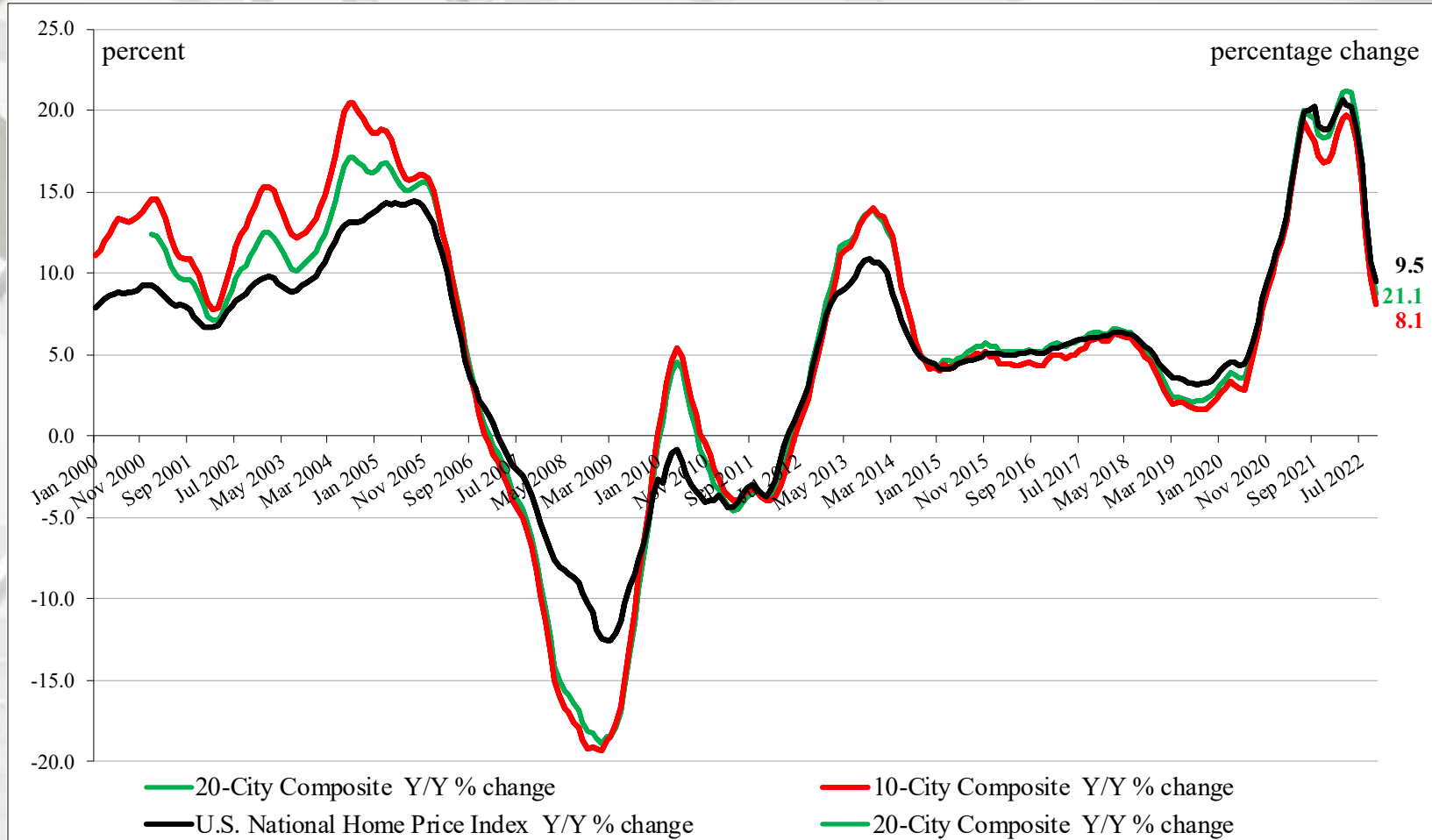


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

S&P CoreLogic Case-Shiller Index

“As the Federal Reserve moves interest rates higher, mortgage financing continues to be a headwind for home prices. Economic weakness, including the possibility of a recession, would also constrain potential buyers. Given these prospects for a challenging macroeconomic environment, home prices may well continue to weaken.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

S&P/Case-Shiller Home Price Indices

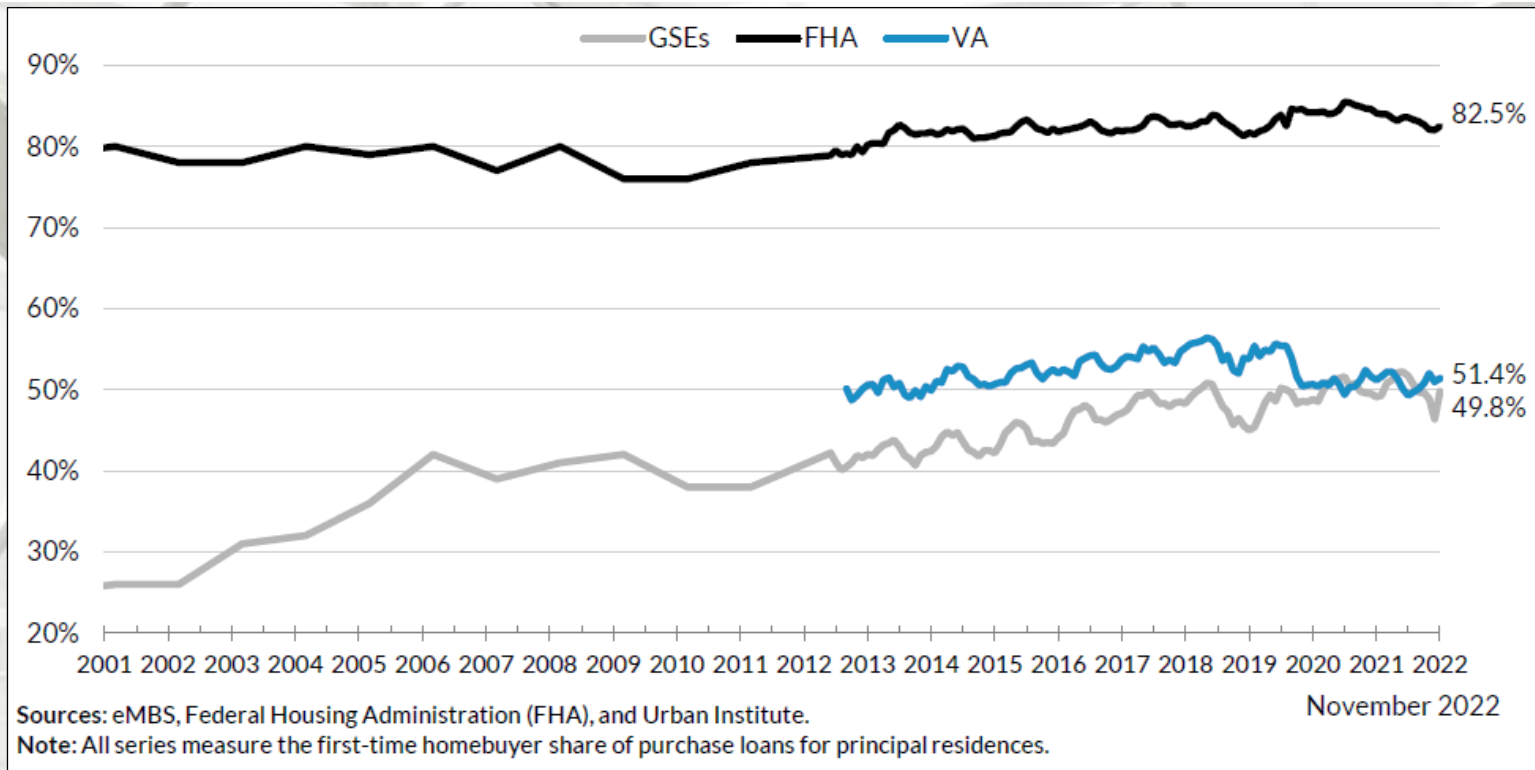


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Y/Y Price Change

From October 2021 to October 2022, the National Index decreased 9.5%; the Ten-City by 8.1%, and the Twenty-City by 8.7%.

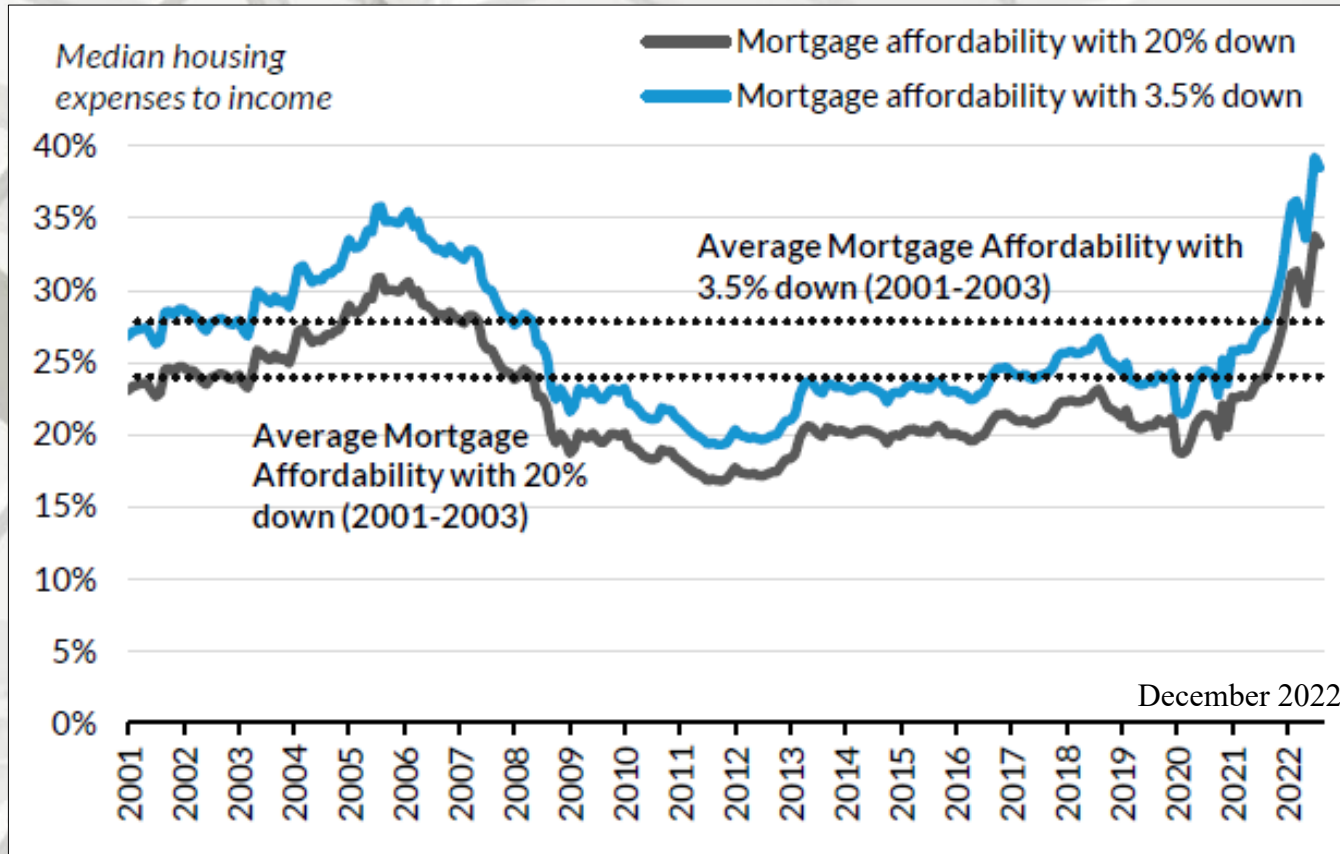
U.S. Housing Affordability



Urban Institute First-time Homebuyers

“In November 2022, the FTHB share for FHA, which has always been more focused on first time home buyers, was 82.5 percent . The FTHB share of GSE lending in November was 49.8 percent; the VA share was 51.4 percent. ... ” – Laurie Goodman *et. al*, Vice President, Urban Institute

U.S. Housing Affordability

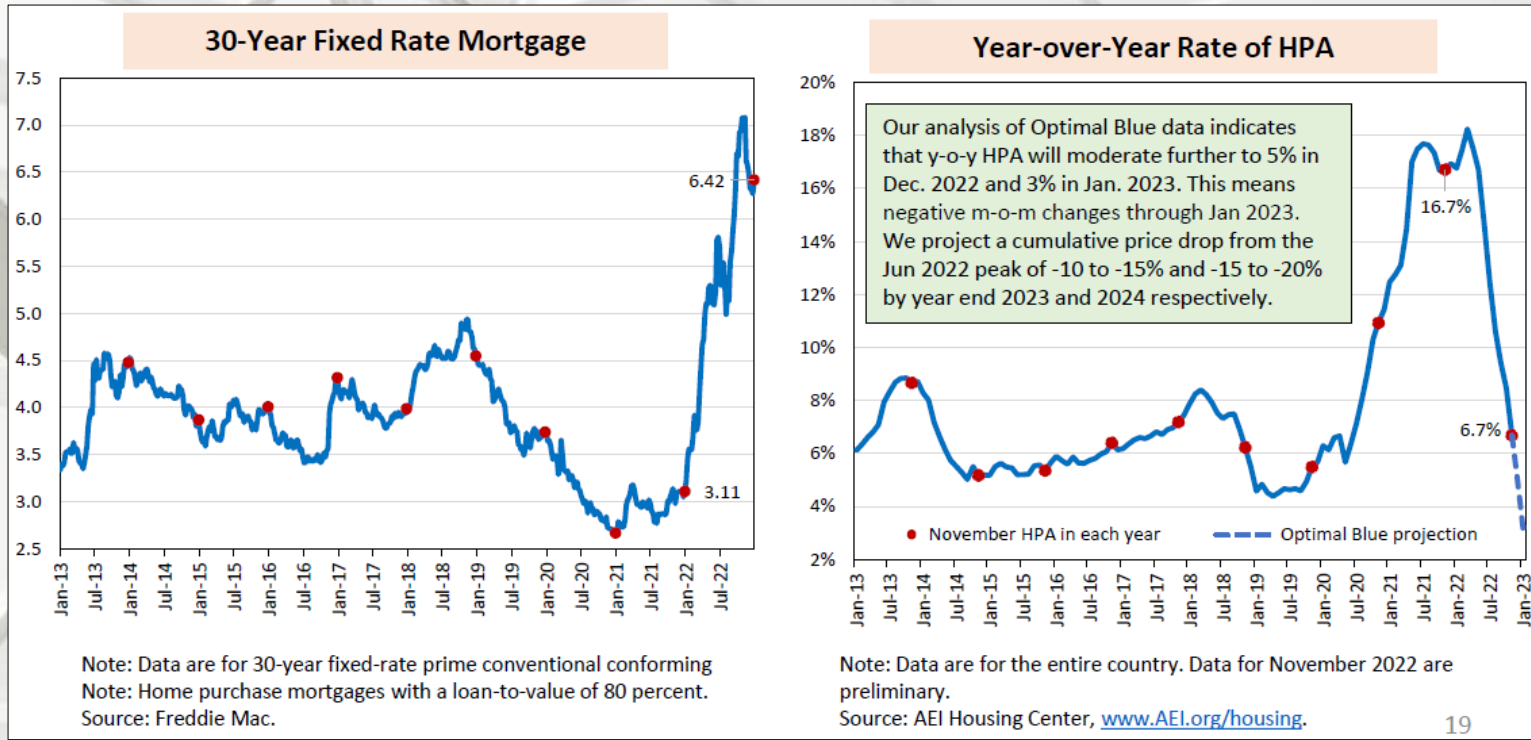


Urban Institute

National Mortgage Affordability Over Time

“With the rise in interest rates, and increases in home prices over the past year, affordability remains poor. As of December 2022, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 32.1 percent, slightly higher than the 30.9 percent at the peak of the housing bubble in November 2005; with 3.5 percent down it is 37.3 percent, also slightly above the 35.8 percent prior peak in November 2005. These numbers represent a sharp worsening in affordability over the past year. As shown ... ” – Laurie Goodman *et. al*, Vice President, Urban Institute

U.S. Housing Affordability



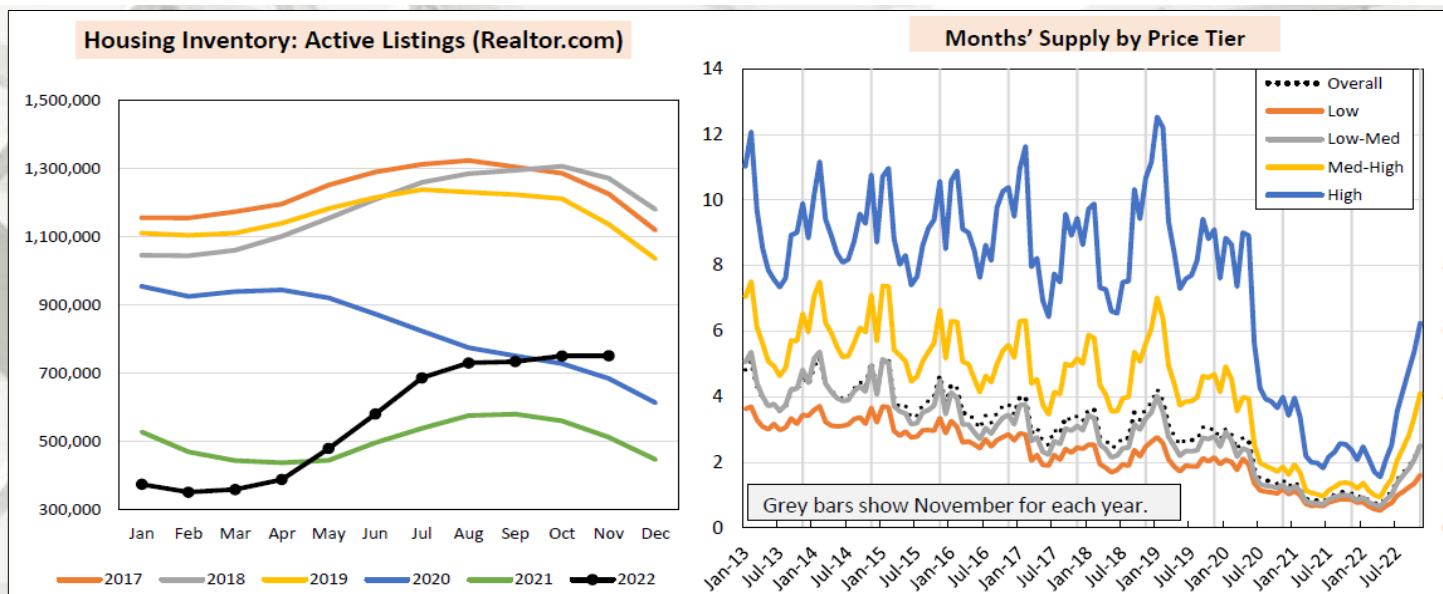
AEI Housing Center

Home Price Appreciation (HPA) Has Decelerated

“November’s YoY HPA was 6.7%, which is down from 8.5% a month ago and a significant drop from the YoY peak of 18.3% in March 2022 and from YoY HPA of 16.7% a year ago.

- Mo MHPA was -0.9%, continuing the downward trend started in July 2022.
- The 10-year-old seller’s market is showing its age, with strong purchase volume declines due to sharply higher rates and a cumulative 38% increase in constant quality HPA since Jan. 2020.
- Constant quality HPA controls for mix shifts, which otherwise may skew m-o-m or YoY changes.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

U.S. Housing Inventory and Months' Supply



Note: Realtor.com, Zillow, and AEI Housing Center, www.AEI.org/housing

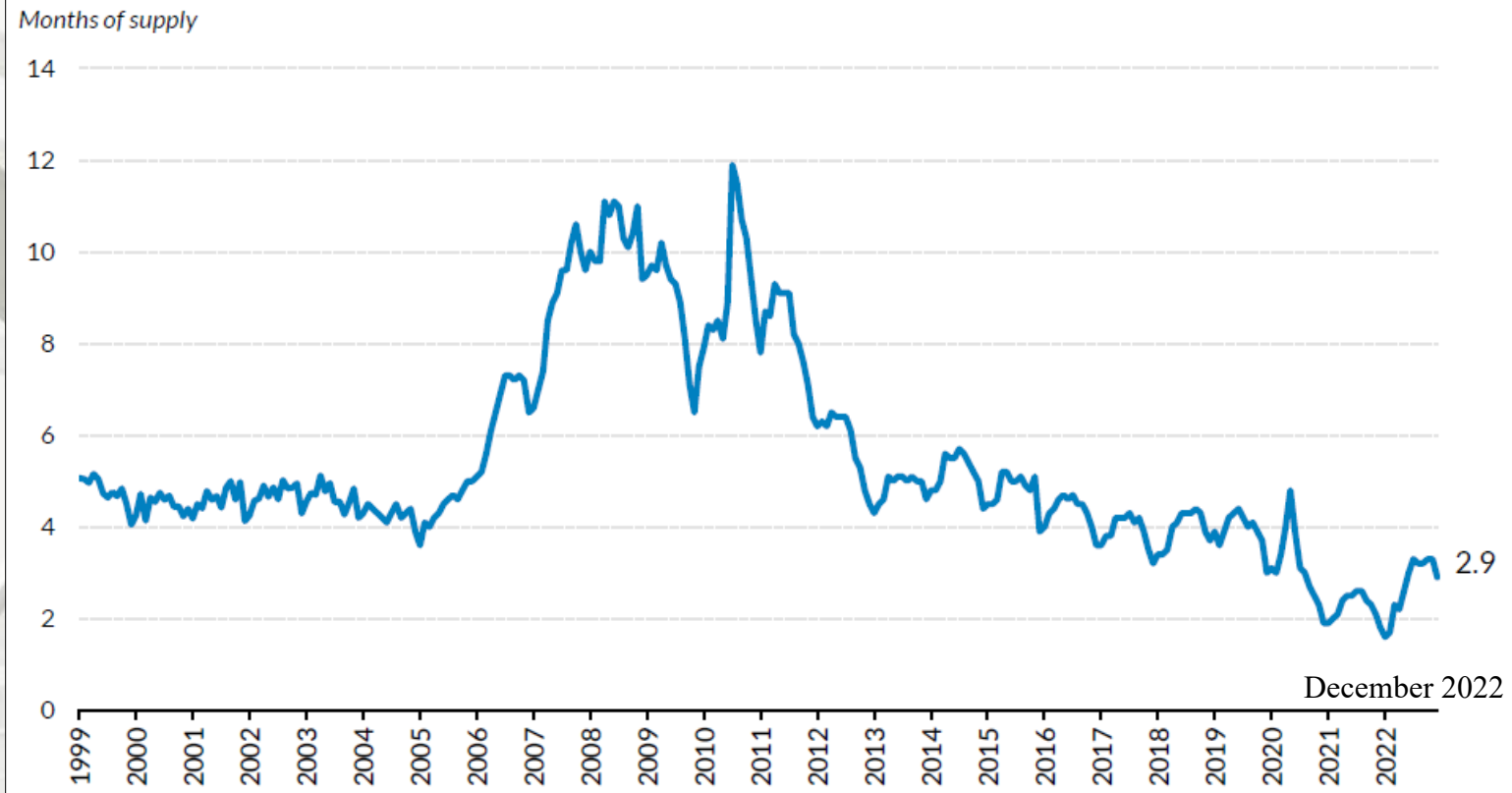
AEI Housing Center

“Housing inventory and months’ supply in November increased beyond expected seasonal changes. Though a good sign in terms of reigning in unsustainable HPA, months’ supply continued to run well below previous years’ levels.

- November 2022 overall inventory was up 47% from a year ago but was still at only half of the 2017 2019 levels. We continue to be a very long way from a healthy supply left panel).
- Months’ supply stood at 2.5 months in November 2022, down from the pre pandemic level of 3.0 months in November 2019, but up from 2.1 months in October 2022 and a trough of 0.9 months in April 2022 (right panel).
- Housing inventory levels would need to increase to > 6 months to indicate a buyer’s market and to 7 9 months to trigger a decline in national YoY home price appreciation.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

U.S. Housing Supply

Months of Supply



Source: National Association of Realtors and Urban Institute. Data as of December

Urban Institute

“Months of supply was 2.9 in December 2022, down marginally from 3.3 in November, but up from a near record low of 1.7 in February 2022. While months of supply remains low by historical standards, higher interest rates have slowed demand, leading to the small increase in months of inventory. Fannie Mae, the MBA, and the NAHB forecast 2023 housing starts to be between 1.14 and 1.41 million units, below 2022 levels. Fannie Mae, Freddie Mac, the MBA, and the NAHB predict total home sales of 4.36 to 5.13 million units in 2023; these estimates all reflect declines from their 2022 sales volume calculations.” – Laurie Goodman et. al, Vice President, Urban Institute

Source: <https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-january-2023>; 1/23/23

Return TOC

U.S. Housing

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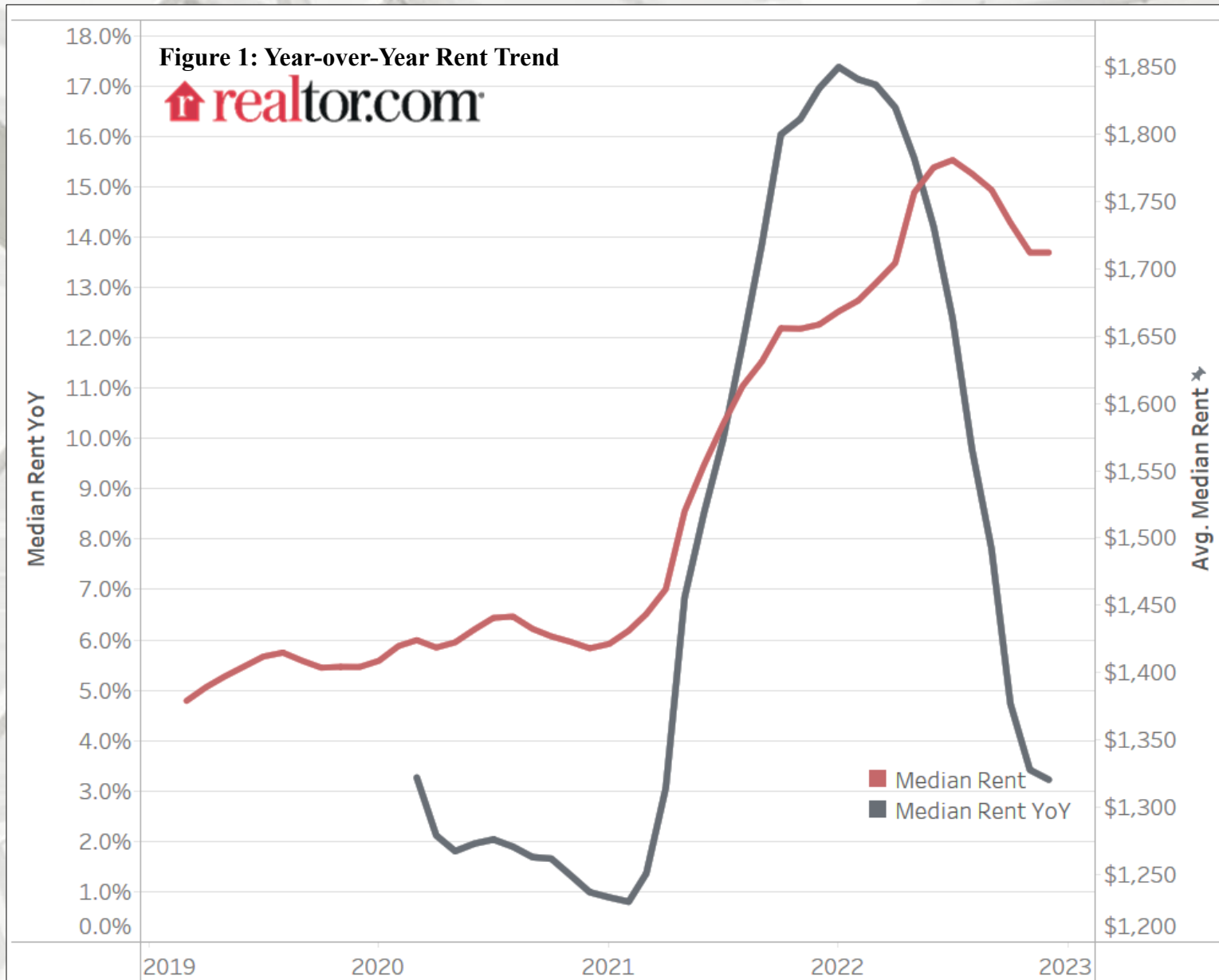
December Rental Report: Despite Rent Growth, Renting a Starter Home is More Affordable than Buying

“Highlights

- With the year-over-year growth rate slowing to 3.2% in December, the 2022 average growth rate for 0-2 bedroom properties across the top 50 metros finished the year in double-digits, at 11.6%.
- Signaling a potential reversal of the recent slowdown, median asking rent plateaued in December (\$1,712), tying November’s level which was down by \$69 from July’s peak.
- In 45 of the 50 largest U.S. metros, the monthly cost of renting a home is lower than buying a starter home, and despite higher rents, renting has become relatively more affordable than buying year-over-year.
- Looking ahead, strong rental demand is expected to outpace improvements in rental supply. Realtor.com® forecasts [that rent growth will continue in 2023, at roughly half the pace](#) of 2022 (6.3%), narrowly above the 2013 to 2019 average rent growth.

After an entire year of slowing down, the year-over-year median rent growth for 0-2 bedroom properties across the top 50 metros hit 3.2% in December 2022, the lowest growth rate in 20 months, down notably from January’s peak trend (17.4%). However, after four months of declines, median asking rent plateaued in December (\$1,712). It is down by \$69 from the peak (July 2022) and is still \$308 (21.9%) higher than December 2019 (pre-pandemic).” – Jiayi Xu and Danielle Hale, Realtor.com®

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The advantage of renting is growing in rent-favoring markets

“A common question potential first-time homebuyers face is whether it makes sense to continue renting or make a home purchase. One of the top considerations is the financial costs and benefits of renting versus owning, and one approach is to compare the monthly housing costs of renting a home against the costs of buying a home. To determine the monthly cost of buying a home, we find the median listing price of 0-2 bedrooms home listings (i.e., starter homes). As [first time home buyers plan lower down payments](#), we assume a 7% down payment (based on the [national average](#) since 2018) and use the 30-year fixed mortgage rate during the month to calculate a monthly mortgage payment. We also include the HOA fees, taxes, and homeowner’s insurance averaged at metro levels as part of the costs. We then compare this buy-cost to the median rent in each metro and focus on the difference between monthly expenses for each.

In December 2022, a typical renter from the top 50 metros faced \$792 (41.4%) lower monthly payment than a starter homeowner on average. In addition, renting is the more affordable option than buying a starter home in 45 of the 50 largest metros. This is a huge increase compared to 12 months ago when renting was the more affordable option in 30 metros.

The monthly savings from renting in rent-favoring markets grew compared to the prior year. In these markets, the monthly cost of buying a starter home in December 2022 was \$906 (48.0%) higher than the cost of renting, on average. However, renting a 0-2 bedroom unit in the rent-favoring markets in Dec. 2021 would have saved just \$450 (22.9%), on average.” – Jiayi Xu and Danielle Hale, Realtor.com®

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The advantage of renting is growing in rent-favoring markets

“Slowing rent growth contributed to this shift: in December 2022, the year-over-year growth in rent-favoring markets was only 3.4%, one fifth of the pace observed 12 months ago. At the same time, skyrocketing mortgage rates upped the cost of taking on a mortgage, making renting relatively more affordable compared to buying. In December 2022, with an average 30-year fixed mortgage rate of 6.36%, the year-over-year growth in the monthly cost to buy for a starter home was 38.1%, climbing to \$2,657. This is more than 10 times the rate of increase for rent during the same period. In comparison, in December 2021, when the mortgage rate was half as high, the cost of buying in rent-favoring markets increased only at about half the rate of rent.

In the top 10 metros that favor renting over buying, the monthly payments for starter homes were 82.2% (\$1,920) higher than rents. Similar to findings in June 2022, these rent-favoring metros are mostly markets with higher concentration of tech workers and high earners, where both the average rent-cost and buy-cost are higher than the national average. Austin, TX topped the list of markets that favor renting, where the monthly cost of buying a “starter” home was \$3,672, which was 121.3% more than the monthly rent of \$1,659, for a monthly savings of \$2,013. San Francisco, CA; Seattle, WA; San Jose, CA and San Diego, CA metro areas round out the top five markets where the cost of buying was higher than the monthly rent.” – Jiayi Xu and Danielle Hale, Realtor.com®

Table 1. Summary Statistics of Rent-favoring Metros

	Counts	Avg. Median Rent	Avg. Monthly Buy Cost	Avg. \$ Diff. (Buy-Rent)	Avg. % Diff. (Buy-Rent)	Avg. Rent YY	Avg. Buy Cost YY
Rent-favoring metros in Dec. 2022	45	\$1,751	\$2,657	\$906	48%	3.4%	38.1%
Rent-favoring metros in Dec. 2021	30	\$1,764	\$2,214	\$450	22.9%	15.9%	8.0%

U.S. Housing

Table 2. Top 10 Metros that Favor Renting over Buying in Dec. 2022

Metro	Median Rent	Monthly Buy Cost	\$ Difference (Buy-Rent)	% Difference (Buy-Rent)	Rent YY	Buy Cost YY
Austin-Round Rock, TX	\$1,659	\$3,672	\$2,013	121.3%	-0.7%	31.1%
San Francisco-Oakland-Hayward, CA	\$2,943	\$5,798	\$2,855	97.0%	3.4%	34.7%
Seattle-Tacoma-Bellevue, WA	\$2,059	\$3,831	\$1,772	86.1%	1.2%	57.3%
San Jose-Sunnyvale-Santa Clara, CA	\$3,156	\$5,777	\$2,621	83.0%	5.9%	39.6%
San Diego-Carlsbad, CA	\$2,702	\$4,787	\$2,085	77.2%	1.2%	51.3%
Los Angeles-Long Beach-Anaheim, CA	\$2,870	\$5,020	\$2,150	74.9%	2.3%	37.7%
Boston-Cambridge-Newton, MA-NH	\$2,868	\$4,965	\$2,097	73.1%	6.4%	32.8%
Portland-Vancouver-Hillsboro, OR-WA	\$1,750	\$2,996	\$1,246	71.2%	4.7%	34.8%
Phoenix-Mesa-Scottsdale, AZ	\$1,592	\$2,708	\$1,116	70.1%	-3.3%	36.6%
Sacramento-Roseville-Arden-Arcade, CA	\$1,834	\$3,075	\$1,241	67.7%	-4.2%	32.9%

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The advantage of renting is growing in rent-favoring markets

“Between December 2021 and June 2022, 11 metros that were previously more favorable for buying became more favorable for renting instead. In December 2022, 10 of these metros still had higher buy costs compared to the cost of renting, which highlights how the persistence of home price gains and mortgage rate increases have shifted the landscape in favor of renting in these areas. In addition, it is interesting to see that even in metros like Miami, Tampa, and Orlando, which have seen some of the highest rent growth and rent costs in the past year, renting offers households a lower monthly cost for starter homes, even as it has become more expensive to do so, raising affordability concerns.” – Jiayi Xu and Danielle Hale, Realtor.com®

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Table 3. Summary Statistics of Buy-favoring Metros

	Counts	Avg. Median Rent	Avg. Monthly Buy Cost	Avg. \$ Diff. (Buy-Rent)	Avg. %Diff. (Buy-Rent)	Avg. Rent YY	Avg. Buy Cost YY
Buy-favoring metros in Dec. 2022	5	\$1,362	\$1,127	\$-235	-18.2%	2.7%	31.6%
Buy-favoring metros in Dec. 2021	20	\$1,500	\$1,261	\$-240	-17.3%	18.3%	9.7%

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The benefit of buying is shrinking in buy-favoring markets

“In December, there were only 5 metros that favored buying starter homes rather than renting. It is a significant decrease from the previous year, when there were 20 metros where buying was a more affordable option.

In these buy-favoring markets, the monthly cost of buying a starter home was \$235 (18.2%) cheaper than the cost of renting, on average. In addition, none of these five metros has a higher monthly buy cost than the national average. However, the financial advantage of buying a starter home instead of renting has decreased in all of these markets. In particular, the savings from buying a starter home rather than renting in Memphis and Baltimore were nearly \$300 less than a year ago. In St. Louis, the savings were \$255 less than last December. In Pittsburgh and Birmingham, the savings were \$130 and \$101 less than the previous year respectively, as high prices and mortgage rates erode the financial payoff to buying, making renting a more attractive option. ...

2023 Rental Market Outlook

In 2022, the average year-over-year growth rate for 0-2 bedroom properties across the top 50 metros was 11.6%. While rent growth slowed throughout 2022, the more moderate slowdown seen in December could suggest that the current downward trend may not continue much longer. In fact, Realtor.com® forecasts [the rent growth will continue in 2023, although at a slower pace.](#)” – Jiayi Xu and Danielle Hale, Realtor.com®

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2023 Rental Market Outlook

“On the demand side, as renting is a more cost-effective option than buying in most of the metros, would-be-homebuyers may spend longer in the rental market, sustaining rental housing demand at a relatively high level. Slowing new single-family construction and anticipated increases in the cost of buying a home in 2023 are likely to reinforce this trend, while expected economic strength increases the number of households searching for a place to call home. However, if the Fed fails to achieve its ‘soft landing’ goal, then a combination of high rent costs, high inflation, and low-income growth may slow the formation of additional renter households. People may prefer to live with their families or take on roommates to save costs and adapt to economic uncertainty.

Specifically, we expect rental demand in big metros to be even stronger in 2023. Dense, urban markets like New York, Chicago, and Boston, which were among the slowest growth metros in 2021, are now topping the fastest growth list. In addition, the biggest rent growth in 2022 was seen among smaller studios, reversing the trend seen in 2021 of larger units commanding the biggest increases. The outperformance of studios is consistent with the recent trend of moving back to urban centers, where studios are more common.

In 2023, we expect a higher number of new rental homes to enter the market, increasing the supply available to renters. With high [mortgage rates](#) and [high listing prices](#), [homebuilding activity continues to pivot to multi-family properties](#). The [latest available data](#) shows that there are more multifamily than single-family homes under construction. Specifically, in November 2022, 915,000 units in buildings with five units or more were under construction compared to 777,000 single family units. In addition, the number of multifamily units under construction is 1.4 times higher than 3 years ago (pre-pandemic) and nearly 4 times higher than a decade ago. Thus, the completion of this extra supply could shift market balance, raising the [still-low rental vacancy rate](#) and helping ease recent rent growth driven by the strong demand.” – Jiayi Xu and Danielle Hale, Realtor.com®

U.S. Housing

Zonda™

New Home Lot Supply Index: 4Q22

“The New Home Lot Supply Index (LSI) for the fourth quarter is up both month-over-month and year-over-year. While the lot market nationally remains “significantly undersupplied,” the latest index value is back to late-2020/early-2021 levels.

The New Home LSI, backed by data from Zonda, shows lot supply loosened year-over-year across the United States. The index is a residential real estate indicator based on the number of single-family vacant developed lots and the rate at which those lots are absorbed.

- The New Home LSI came in at 49.1 for 4Q22, representing a 27.5% increase from 4Q21. The LSI is now back to late-2020/early-2021 levels.
- On a quarter-over-quarter basis, supply increased by 24.9%, up from 3Q22.
- Despite the increase, the 4Q22 data still reflects a significantly undersupplied market nationally.

“The increase in the index captures some of the healing going on in the residential housing market. With both sales and starts lower than the frenzied pace seen over the past few years, there are early signs that availability for lots, materials, and labor are improving. More importantly, costs in these three categories are flattening in some cases and coming down in others in response to the slower market.” – Ali Wolf, Chief Economist, Zonda

U.S. Housing

Zonda™

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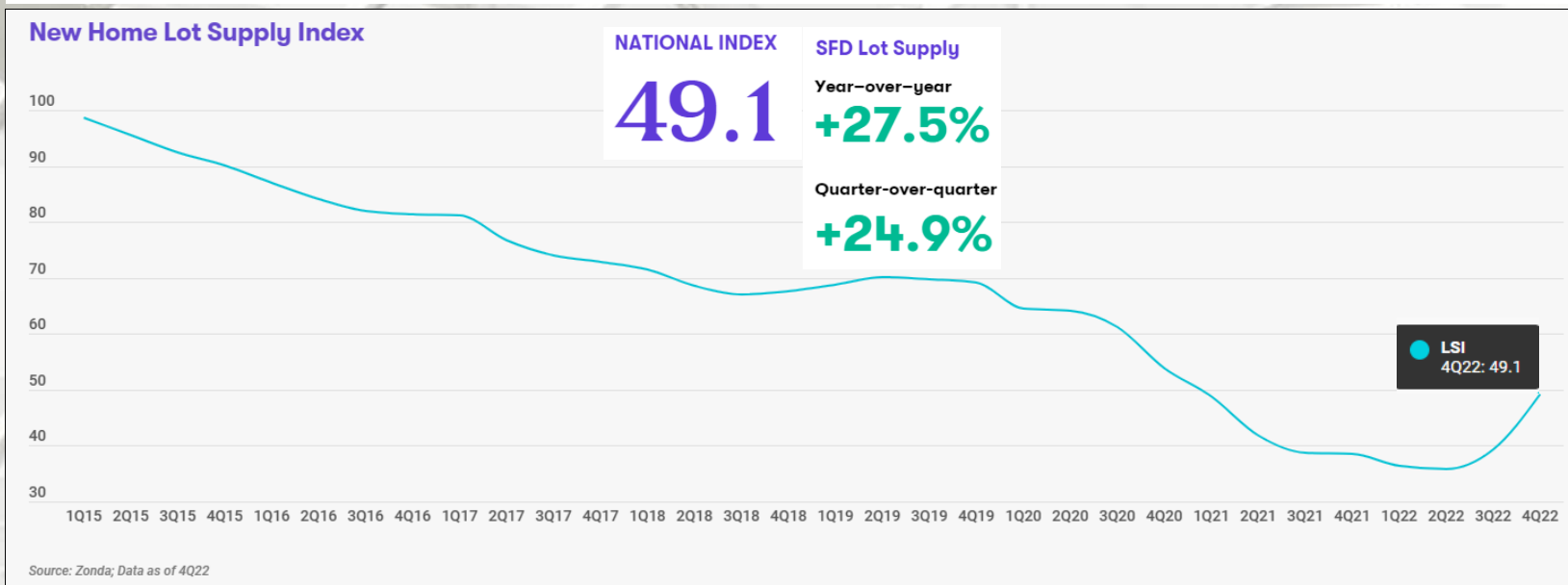
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U.S. Housing

Zonda™

New Home Lot Supply Index: 4Q22



U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week

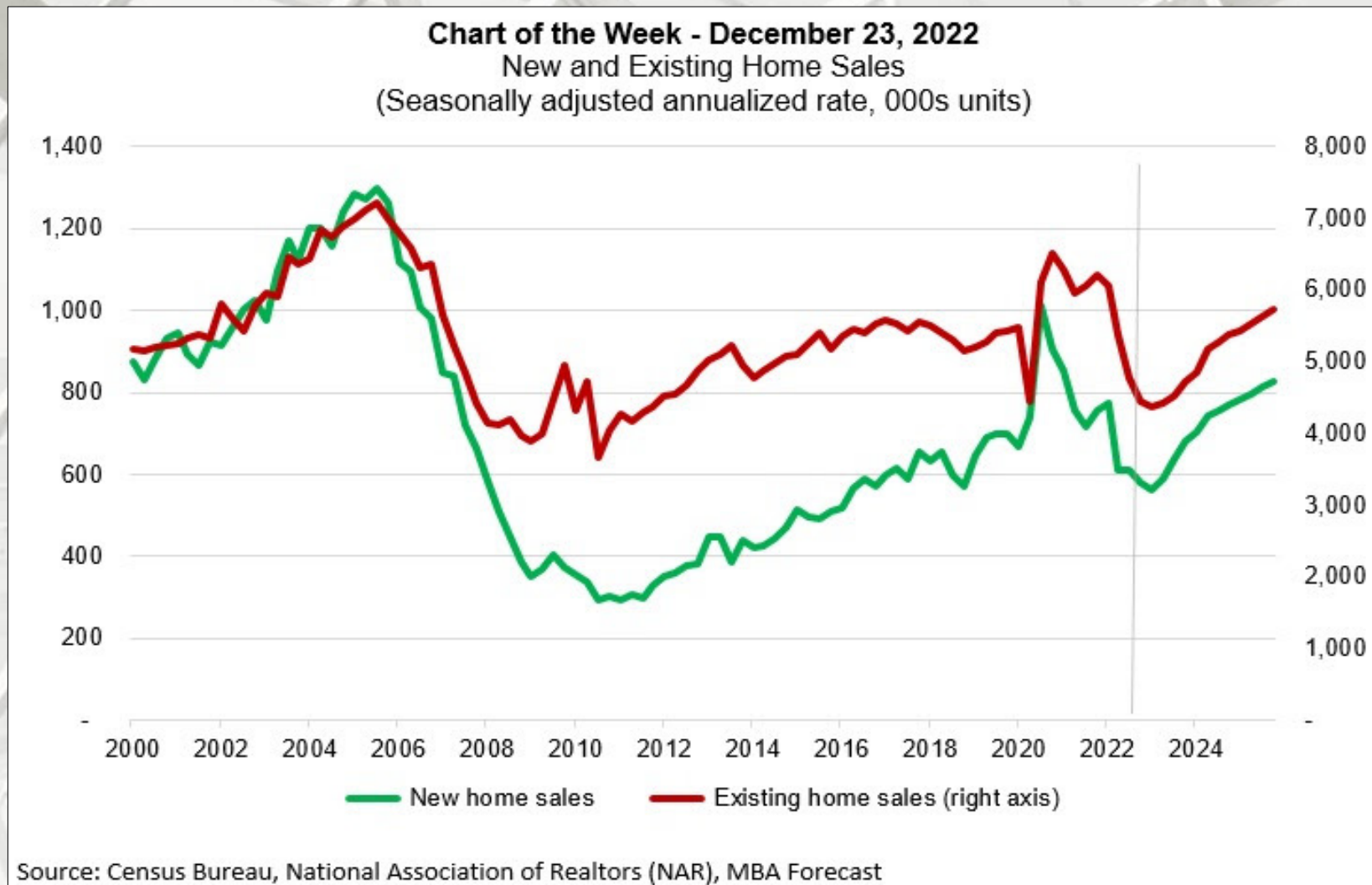
“Recent data from NAR showed that the annualized pace of existing home sales in December 2022 was 4.09 million units – a 35% drop compared to December 2021. This decrease was consistent with the pace of home purchase applications, which have been running around 40% behind last year’s pace over the past few months, based on data from [MBA’s Weekly Applications Survey](#). Additionally, the National Association of Homebuilders’ (NAHB) index of builder sentiment has recorded declines in every month of 2022, citing slower buyer traffic and reduced sales expectations. The impact of that sentiment has shown up in Census data on single-family housing starts, weakening in all but two months so far this year, and MBA’s estimate of new home sales, which has declined in eight out of the past 11 months. One of the main drivers of these trends was the rapid doubling of mortgage rates over the course of 2022 — from around 3% to over 7%, which pushed many buyers out of the market. The [median purchase mortgage payment](#) remained close to \$2,000 in December, an increase of \$594 over the first 11 months of the year, equal to a 42.9% increase, which has severely reduced homebuyer purchasing power.

Taking all this into account, we are forecasting a weak start to 2023 for the housing market. Driven by a recession in the first half of the year and a continuation of the trends outlined above, we expect a 13% drop in existing home sales and a 4% decrease in new home sales for 2023, following 16% decreases in both segments in 2022. Additionally, even though third quarter 2022 data still showed a 12% year-over-year increase in home prices, recent monthly changes have been negative, and the declines in some parts of the country have been quite large. We expect that the low inventory of existing homes and lack of distressed properties on the market will prevent a deeper decline in national home prices, but we do expect more quarters of negative year-over-year price changes.” – Mike Fratantoni, Chief Economist and Senior Vice President of Research and Joel Kan, Industry Technology and Associate Vice President, Industry Surveys and Forecasts, MBA

U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week



U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week

“However, we remain bullish on housing demand in the medium term: there are 50 million 28-38 year-olds in the US population right now. Household formation should remain robust for the coming years, and many of these young people are at or approaching peak first-time homebuyer age. The first-time homebuyer share is currently 28% after averaging around 40% before rates spiked and that is expected to rebound. The end of the recession, supportive demographic drivers, along with the moderation in home prices and lower mortgage rates that will ease some of the affordability hurdles, will support a 15% increase in existing home sales and a 21% increase in new home sales for 2024.

We do expect that the housing market will lead the U.S. out of this recession, just as it has led the way into one.” – Mike Fratantoni, Chief Economist and Senior Vice President of Research and Joel Kan, Industry Technology and Associate Vice President, Industry Surveys and Forecasts, MBA

U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week

“ ...

Central to the discussions we expect to hear are the changing tides in different property markets. This week, the Census Bureau released the latest numbers from their quarterly Housing Vacancy Survey (HVS). In response to an [S&P commentary](#) on the HVS release titled “US housing markets remain super tight in the fourth quarter,” our internal email chain responses were “Indeed. Tight Housing market,” and “Agreed. Also worth noting that seasonality matters.”

The “tight housing market” comment derives from the fact that the multifamily vacancy rate in Q4 2022 was 5.8 percent, one of the lowest readings since the mid-1980s and down 20 basis points from Q3. The US housing market remains essentially full, the key driver for Harvard’s Joint Center for Housing Studies recent finding that the “number of renters burdened by housing costs reached a record high in 2021.”

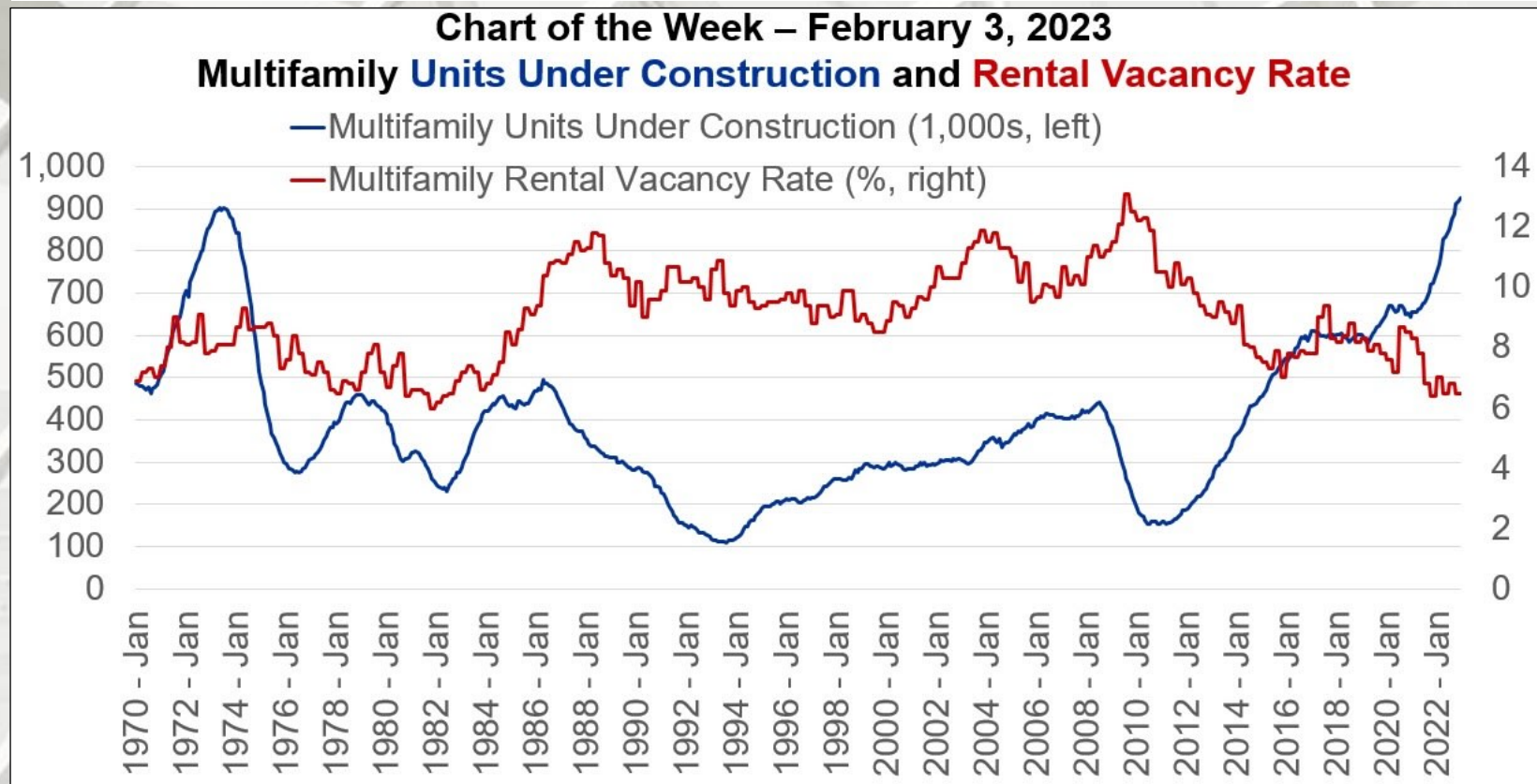
The “seasonality matters” comment hits at the fact that on a year-over-year basis (taking into account the seasonal ebbs-and-flows of demand) the 0.2 percentage point increase may signal that the tide of tightening in multifamily markets we’ve seen over the last decade may be beginning to reverse – as the demand from millennials naturally (markets willing) shifts to homeownership from renting and a wave of additional multifamily supply waits in the wings.

We’ve been noting that CRE today sits at the center of changes in the space, equity, and debt markets – all of which face questions that are affecting transaction volumes. [CREF23](#) will be a great opportunity for all of us to learn more about where the markets are likely to go from here.” – Jamie Woodwell, Vice President, Research & Economics, MBA

U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week



U.S. Housing Finance

Mortgage Bankers Association (MBA)

Mortgage Credit Availability Remained Flat in January

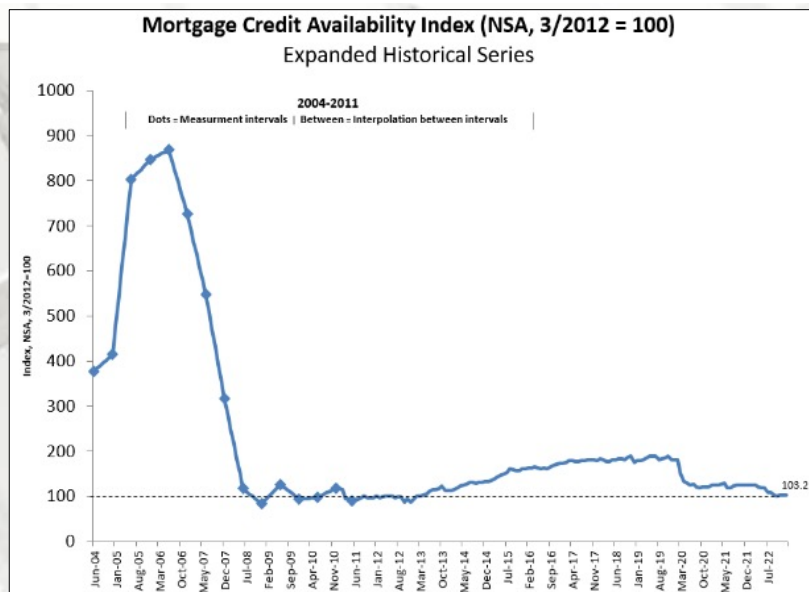
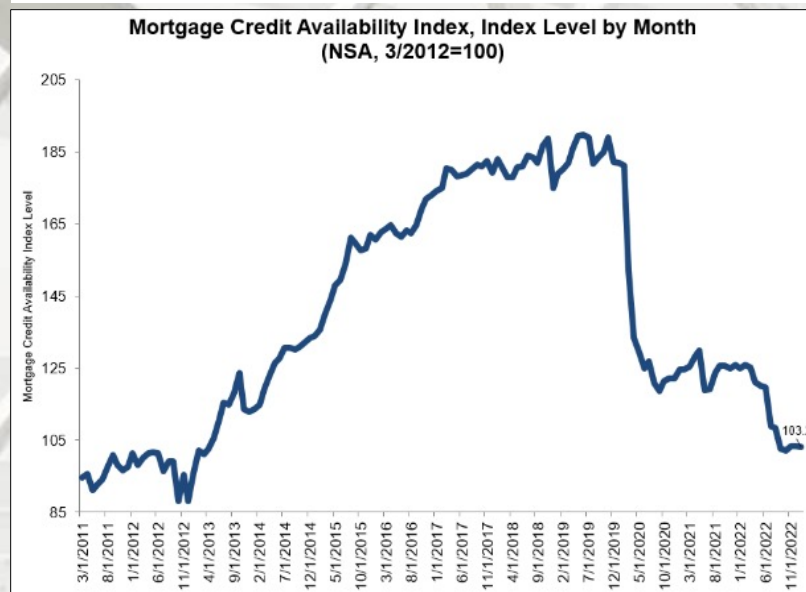
“Mortgage credit availability decreased in January according to the Mortgage Credit Availability Index (MCAI), a report from the Mortgage Bankers Association (MBA) that analyzes data from ICE Mortgage Technology.

The MCAI fell by 0.1 percent to 103.2 in January. A decline in the MCAI indicates that lending standards are tightening, while increases in the index are indicative of loosening credit. The index was benchmarked to 100 in March 2012. The Conventional MCAI decreased 0.3 percent, while the Government MCAI remained unchanged. Of the component indices of the Conventional MCAI, the Jumbo MCAI decreased by 0.4 percent, and the Conforming MCAI remained unchanged.

Mortgage credit availability was essentially unchanged in January and remained close to its lowest level since 2013. Similar to December 2022, the availability of credit has been driven lower by declining originations and shrinking industry capacity as lenders have streamlined their operations to cope with lower volumes. Additionally, as mortgage rates declined over the past month, the share of adjustable-rate mortgages has fallen – consistent with a slight pullback in ARM offerings in this month’s results. However, there has been a revival in mortgage application activity over the past month and our forecast is for rates to continue to decline and housing activity – including home sales and new home construction – to gradually pick up as we approach the spring homebuying season. These developments could potentially change the credit availability landscape in the months ahead.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

U.S. Housing Finance

Mortgage Credit Availability (MBA)



Source: Mortgage Bankers Association; Powered by Ellie Mae's AllRegs® Market Clarity®

MBA Mortgage Finance Forecast

MBA Mortgage Finance Forecast

January 19, 2023

	2022				2023				2024				2021	2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Housing Measures																	
Housing Starts (SAAR, Thous)	1,720	1,647	1,450	1,403	1,435	1,406	1,415	1,432	1,482	1,521	1,564	1,583	1,605	1,555	1,422	1,538	1,645
Single-Family	1,187	1,086	905	862	883	897	924	964	1,031	1,083	1,135	1,162	1,131	1,010	917	1,103	1,215
Two or More	533	561	545	541	552	509	491	468	451	438	429	421	474	545	505	435	430
Home Sales (SAAR, Thous)																	
Total Existing Homes	6,057	5,373	4,770	4,130	4,220	4,346	4,482	4,678	4,910	5,098	5,227	5,317	6,127	5,082	4,431	5,138	5,535
New Homes	776	612	610	599	585	598	631	672	710	732	752	761	769	649	622	739	799
FHFA US House Price Index (YOY % Change)																	
Median Price of Total Existing Homes (Thous \$)	18.8	17.9	14.2	8.2	4.1	2.4	0.9	-0.6	-2.5	-2.5	-1.9	-1.2	17.6	8.2	-0.6	-1.2	2.1
Median Price of New Homes (Thous \$)	365.8	405.9	391.5	371.3	365.2	363.8	375.7	379.0	367.0	378.8	379.1	382.7	347.9	383.6	370.9	376.9	385.9
Median Price of New Homes (Thous \$)	431.3	447.0	462.0	466.4	438.5	431.4	430.3	432.0	424.9	438.1	440.8	443.2	394.0	451.7	433.1	436.8	446.7
Interest Rates																	
30-Year Fixed Rate Mortgage (%)	3.9	5.3	5.7	6.6	6.2	5.6	5.4	5.2	5.0	4.7	4.4	4.4	3.2	6.6	5.2	4.4	4.4
10-Year Treasury Yield (%)	1.9	2.9	3.1	3.8	3.5	3.3	3.2	3.0	2.9	2.7	2.5	2.5	1.5	3.8	3.0	2.5	2.5
Mortgage Originations																	
Total 1- to 4-Family (Bil \$)	689	678	480	398	333	497	517	541	470	628	595	586	4,436	2,245	1,888	2,279	2,468
Purchase	381	477	388	332	267	384	391	397	324	474	428	418	1,863	1,578	1,439	1,644	1,783
Refinance	308	201	92	66	66	113	126	144	146	154	167	168	2,574	667	449	635	685
Refinance Share (%)	45	30	19	17	20	23	24	27	31	25	28	29	58	30	24	28	28
FHA Originations (Bil \$)													337	158	128	139	139
Total 1- to 4-Family (000s loans)	1,939	1,789	1,206	973	816	1,216	1,267	1,331	1,172	1,560	1,493	1,476	13,549	5,907	4,630	5,700	6,177
Purchase	1,000	1,202	946	790	634	907	921	937	769	1,133	1,028	1,007	5,204	3,938	3,398	3,936	4,272
Refinance	938	588	260	182	182	310	345	394	402	427	465	470	8,346	1,969	1,231	1,764	1,905
Refinance Share (%)	48	33	22	19	22	25	27	30	34	27	31	32	62	33	27	31	31
Mortgage Debt Outstanding																	
1- to 4-Family (Bil \$)	12,695	12,971	13,195	13,325	13,439	13,570	13,664	13,720	13,755	13,806	13,850	13,876	12,549	13,325	13,720	13,876	14,093

Notes:

As of the August 2022 forecast, 2021 origination volume was revised based on the 2021 Home Mortgage Disclosure Act data. Total 1-to-4-family originations and refinance share are MBA estimates. These exclude second mortgages and home equity loans. Mortgage rate forecast is based on Freddie Mac's 30-Yr fixed rate which is based on predominantly home purchase transactions. The 10-Year Treasury Yield and 30-Yr mortgage rate are the average for the quarter, but annual columns show Q4 values. The FHFA US House Price Index is the forecasted year over year percent change of the FHFA Purchase-Only House Price Index. Copyright 2023 Mortgage Bankers Association. All rights reserved. THE HISTORICAL DATA AND PROJECTIONS ARE PROVIDED "AS IS" WITH NO WARRANTIES OF ANY KIND.



MBA Economic Forecast

MBA Economic Forecast

January 19, 2023

	2022				2023				2024				2021	2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Percent Change, SAAR																	
Real Gross Domestic Product	-1.6	-0.6	3.2	2.3	-1.8	-1.4	1.5	2.0	1.9	2.0	1.8	1.9	5.7	0.8	0.1	1.9	1.8
Personal Consumption Expenditures	1.3	2.0	2.3	3.1	0.7	0.2	1.4	1.5	1.4	1.7	1.8	2.1	7.2	2.2	1.0	1.8	2.1
Business Fixed Investment	7.9	0.1	6.2	1.9	-2.3	-3.1	-0.4	1.1	1.2	1.5	1.3	1.4	5.0	4.0	-1.2	1.4	2.0
Residential Investment	-3.1	-17.8	-27.1	-24.6	-12.9	1.6	8.4	9.4	13.0	13.5	12.6	11.0	-0.3	-18.7	1.2	12.5	4.7
Govt. Consumption & Investment	-2.3	-1.6	3.7	1.4	3.4	1.0	0.9	0.8	0.8	0.8	0.7	0.8	0.5	0.3	1.5	0.8	0.8
Net Exports (Bil. Chain 2012\$)	-1260.3	-1207.6	-1063.8	-1085.2	-1131.1	-1153.0	-1155.3	-1154.7	-1180.7	-1206.6	-1238.6	-1275.9	-1037.4	-1154.2	-1148.5	-1225.4	-1337.2
Inventory Investment (Bil. Chain 2012\$)	182.4	93.7	32.9	87.5	33.0	-11.5	-11.0	-0.5	21.0	37.3	45.2	53.1	-16.5	99.1	2.5	39.2	59.9
Consumer Prices (YOY)	8.0	8.6	8.3	7.1	5.6	3.9	3.1	3.0	2.7	2.3	2.3	2.1	5.6	7.1	3.0	2.1	2.2
Percent																	
Unemployment Rate	3.8	3.6	3.5	3.7	3.8	4.6	5.2	5.2	5.0	4.7	4.5	4.4	5.4	3.7	4.7	4.7	4.2
Federal Funds Rate	0.375	1.625	3.125	4.375	4.875	4.875	4.875	4.875	4.375	3.875	3.875	3.375	0.125	4.375	4.875	3.375	2.375
10-Year Treasury Yield	1.9	2.9	3.1	3.8	3.5	3.3	3.2	3.0	2.8	2.7	2.5	2.5	1.5	3.8	3.0	2.5	2.5

Notes:

The Fed Funds Rate forecast is shown as the mid point of the Fed Funds range at the end of the period.

All data except interest rates are seasonally adjusted

The 10-Year Treasury Yield is the average for the quarter, while the annual value is the Q4 value

Forecast produced with the assistance of the Macroeconomic Advisers' model

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MBA

MORTGAGE BANKERS ASSOCIATION

Summary

In conclusion:

Year-over-year and month-over-month data were mostly negative. Housing under construction and completions (year-over-year), in December, were the “bright” spots for new housing construction. Increasing borrowing costs and consumer sentiment, combined with elevated house prices have resulted in a major obstacle for new and existing house sales.

Pros:

- 1) The desire to own a house remains strong, though consumer sentiment may be waning

Cons:

- 1) Mortgage interest rates and affordability;
- 2) Inflation;
- 3) The war in Ukraine;
- 4) Construction material, appliance constraints, and logistics/supply chains remain;
- 5) Lot availability and building regulations (according to several sources);
- 6) Labor shortages in many sectors;
- 7) Household formations still lag historical averages;
- 8) Job creation is improving and consistent, but some economists question the quantity and types of jobs being created;
- 9) Debt: Corporate, personal, government – United States and globally;
- 10) Other global uncertainties.

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